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VOLUME XXIV
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··ıı CONTENTS ıı··

YOUR EDUCATION VERSUS MINE — THEODORE J. G. LOCHER — 395

Mr. Locher, a Professor of History at the University of Leyden, spent a year as visiting professor at the University of Michigan. In this article he makes some searching but friendly comparisons between the American colleges and universities he visited and European universities.

A "TERMINAL" COURSE IN PHILOSOPHY — C. J. DUCASSE — 403

When this paper was read before the Western Conference on the Teaching of Philosophy held last May at St. Louis, it aroused considerable discussion. The "Journal" is glad to afford it wider distribution. Mr. Ducasse is Professor of Philosophy at Brown University.

ON WRITING THE HISTORY OF LAND-GRANT COLLEGES AND UNIVERSITIES — EARLE D. ROSS — 411

In this article a College Historian urges that the writers of institutional histories trace and make explicit the interplay of social forces which have shaped land-grant colleges and universities, rather than recount episodes and summarize biographies. Mr. Ross is Professor of History at Iowa State College.

COLLEGE AND THE YEARS AFTER — LEONARD JORDAN WEST — 415

From the mass of findings accumulated in an extensive survey of more than six thousand graduates of New York City municipal colleges, Mr. West has selected the facts which have general interest and relevance. Mr. West is now Research Psychologist, Human Resources Research Center, Chanute Air Force Base, Illinois.

BASIC NATURAL SCIENCE IN LIBERAL EDUCATION — EDWARD C. FULLER — 420

Mr. Fuller, Director of the Area of Natural Sciences and Mathematics and Professor of Chemistry, summarizes here the objectives of Basic Natural Science at Champlain College, the methods used in attaining them, and some of the results achieved. This course is one of five yearlong courses taken by all liberal-arts students during the freshman or sophomore year.

CERTAIN CHARACTERISTICS OF GENERAL EDUCATION — JUDSON R. BUTLER — 425

Dean Butler of Boston University has, in his own words, "attempted to give a brief description of certain characteristics which do, or perhaps should, distinguish general-education programs from traditional curriculums."

CONTENTS (*Continued*)

WITH THE TECHNICIANS 432

Predicting College Achievement, reported by Herbert W. Samenfeld, Assistant Professor of Education and Psychology, New Haven State Teachers College; Biological Research in Liberal-Arts Colleges, reported by John R. Sampey, Professor of Chemistry, Furman University; Hawkeye or Uncas? reported by George Mair, formerly Student Activities Adviser, Student Personnel Services, University of California at Los Angeles, now with the United States Army.

THE REPORTER 438

University of Wisconsin studies film utilization; University of California, Los Angeles, conducts investigation of seismic phenomena; new placement organization formed; Association of American Geographers calls for improved teaching of geography; new scholarships established at Illinois Institute of Technology; Radcliffe College develops Women's Archives library; Fund for Adult Education makes grant to widen education in labor unions; Harvard University Graduate School of Design reorganizes training program; Stanford Medical School to move to Palo Alto; "Pictorial Guidebook to Colleges in the Empire State"; English-language centers established in Indonesia; annual report of Carnegie Corporation.

EDITORIAL COMMENTS 442

REVIEWS 444

"When Peoples Speak to Peoples: Action Guide to International Cultural Relations for American Organizations, Institutions, and Individuals," by Harold E. Snyder; "Who Should Go to College," by Byron S. Hollinshead; "The Development and Scope of Higher Education in the United States," by Richard Hofstadter and C. DeWitt Hardy; "Nature and Needs of Higher Education: the Report of the Commission on Financing Higher Education"; "Higher Education in the Forty-Eight States: a Report to the Governors' Conference," by the Council of State Governments; "Scholar's Workshop: Evolving Conceptions of Library Service," by Kenneth Brough.

IN THE LAY MAGAZINES v

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BELL TELEPHONE SYSTEM

The Journal of Higher Education · NOVEMBER, 1953

Your Education Versus Mine

By THEODORE J. G. LOCHER

A Visiting Professor's View of American Higher Education

IN A Netherlands city, say in Amsterdam, when two people have a fight and a policeman tries to interfere, the likely outcome is that they will both join together and turn against the cop. So far as I know the Americans, this might happen in America also. For that reason I write this article with some reservations. An outsider meddling with domestic controversies is never welcome, whether he be a policeman or a professor, and even though the issue may be entirely spiritual. In writing on education one cannot but touch tender spots, and the reactions, therefore, may be quite emotional. On the other hand, what is the sense of having visiting or exchange professors, if they are not encouraged to voice their experiences and views of the other country's educational ways and aims? So let me, out of my limited experiences, try to describe some of my impressions of an American university and its students, and give some of the reflections connected with them.

The first thing which strikes a Dutch professor coming to an American university is its size. An American and a European university are in the proportion of an American and a European newspaper, or shrimp, or robin. There seems to be a tendency over here to adjust the dimension of things to the proportions of this country. However, I soon realized that in the case of the university there are other factors involved. The size of an American university has something to do with its scope and function in society. An American university may embrace all sorts of schools and institutions which in Europe a university seldom includes, such as a college of engineering, a school of music, a school of education for the training of primary-school teachers, schools of public health and of business administration, departments of physical education and of

speech, including theater, and even courses in novel-writing. In other words, an American university often covers nearly every aspect of higher vocational training, whereas the European is limited to those that are fundamentally scholarly or scientific. Elsewhere I have compared the European university to a proud castle, sharply marked out against the countryside, and the American university to a big industrial city, with its vast manufacturing and residential suburbs.

Now even if we discount the number of students attending these "suburban" special schools and courses, we are entitled to say that proportionally a far greater number of students go to college in this country than attend European universities. The same may be said of high-school attendance. This mass education up to a rather late age cannot but affect the methods of instruction, and the level that can be reached. The problem of rearing an élite will have a different aspect in this country.

AS FAR as I can see from my scanty experience, the American student entering college has not nearly reached the level of his European colleague entering the university. He has not been held to a strict schedule of required subjects, including some foreign languages and mathematics and sciences. He has not passed a rather severe final examination, *Baccalauréat* or *Abitur*, required for admission to the university in Europe. On entering college he still has to study the greater part of the subjects of the senior grades of the European high school. But he need not cover them all. The elective system makes it possible for him to skip some of them. So the American college is comparable to the higher grades of the European Gymnasium, but only to a certain degree. In fact, there is nothing exactly like an American college in the European educational system at all. The European high schools, Gymnasia, and so on provide for a liberal education at an earlier age, in a much more stringent way. I was told by a Dutch university professor of physics working in America that Dutch high schools of certain types impart to their pupils a knowledge of physics such as is not attained by students in this country until near the end of their college years. Thus the European universities can start with special or vocational training right at the beginning of the freshman year, and most of them, in fact, do.

It is, therefore, not feasible to compare the American college student with the European university student. That this comparison is often made, nevertheless, can be accounted for only by the fact that an American college often is a part of a university. Many courses are given for upperclassmen and graduates simultaneously, bringing together students not only of different levels but also of very different talents. I encountered the difficulties of having to give a course attended by scholarly-minded and gifted Masters' and Doctors' candidates and by undergraduates some of whom most probably would never have been able to enter a European university. It is virtually impossible to satisfy the wants of both categories. An attempt to compromise might have the effect of not satisfying anyone.

In addition, the elective system

of course units accounts for a difference of academic background even among students of the same major subject and level. For this reason, the teacher sometimes finds very little fundamental knowledge or training in the field of his subject to build upon. He often has the feeling that he is laying bricks in gaps.

It is obvious that the college cannot fill up all these gaps, even by offering general courses in all sorts of subjects. So it may happen that in a seminar of graduates in history no student can tell you anything about the fundamental principles of Marx's social theory or philosophy of history, because this belongs to political or social science, and none of the participants seemed to have attended a basic course in these subjects.

AMERICANS often blame the European university education for overemphasis on specialization. The European student, they say, is getting a professional training, not a liberal education. He may do a lot of general reading but he can do it only in his spare time and on his own hook. The university does not care for it. There certainly is, or until recently was, some truth in this charge. Many universities, therefore, have started to organize courses for all students under the collective title of *studium generale*. They are mostly in such fields as philosophy, psychology, and political and social science. Languages, history, and natural science as a means of general education are considered to have been dealt with sufficiently at the Gymnasium level.

Odd as it may seem, I am inclined to return the charge. In my opinion Americans believe in specialization at an early level much more than Europeans do. They do not seem to believe that a broad and solid base of general knowledge is the necessary fundamental of specialization in a subject. Elementary- and high-school pupils often have to write papers on a person or a topic without much idea of the circumstances in which the man lived, or of the course of events and the general trends influencing the subject. It seems that it is more important here to awaken the child's interest, to activate him, and to give him a certain amount of training than to impart fundamental knowledge to him.

In Europe it is often the other way around. In the Dutch schools the children usually are taught solid surveys of facts, though some schools are experimenting with new methods in order to combine activation with solidity. They probably could do more in this direction. On the other hand, I believe that American education, particularly at the high-school level, would not sustain damage by taking some steps in the other direction. I know that I am touching a tender spot here. The high school, in particular the public high school, is supposed to provide an education for the average, whereas in Europe, high-school attendance is restricted to the intellectually talented. Here the problem of selection comes in. I cannot see why there should not be more differentiation at the high-school level so that the gifted pupils would get more thorough training. Democracy has to solve the problem of selection anyway; why should it not start screening at this level? Now this is postponed to the college, and even to the graduate,

level. That means either that a fairly large number of students discover rather late that they have aimed beyond their capacities or that the standards of the college or the university are leveled down.

Perhaps I am judging too much from a European standpoint in these matters. I certainly am aware that American education has a requirement which European education is not bound by, that is, to mold American citizens out of people of many different national extractions. So far as civic education goes, America is certainly in advance of some European countries, at least the Netherlands, where the tight schedule of languages and natural sciences does not leave much time for civics or social sciences. On the other hand, I think that there is a waste of time in many American high schools. I am thinking of courses in basic living, and so on, which, so far as I can judge from hearsay, are not extremely useful or necessary. High-school pupils who are capable and intend to go to college might get better food for their intellectual wants, and I know that some of them would enjoy it. Now, they have to make up in college for many things which easily could have been done at the high-school level. This accounts for the fact that regimenting in American education starts right at the college level, whereas it usually ends there in Europe, and the methods of college teaching have to be rather formal and restrictive.

THE American college student's lack of freedom is what strikes a European professor. He is accustomed to much more of it than he finds here. Freedom, not in the choice of subjects of study, in which America surpasses Europe, but liberty in the sense that the European, particularly the Dutch, student is no longer considered as a schoolboy, whereas the American is. The latter is bound by a strict schedule of classes and examinations almost throughout the year. He is surrounded by deadlines. He is under the continuous supervision of his adviser and the teaching fellows. He is not supposed to cut classes, and he has to complete his readings and papers in due time. Even at the graduate level his freedom is far from complete, though the amount of it may differ from university to university. In some places the graduate student is still regimented considerably. When he has to write two papers for two professors, he probably has to work on them simultaneously, since both professors may require weekly reports. He hardly has any time to do extra research in a subject which particularly interests him. He might like to go into it more deeply, but he cannot. The time schedule and the system of marks control most of his activities.

In Europe, regulations vary according to countries, universities, and even departments in universities. Generally speaking, however, the European student (I do not include the English) is freer than his American colleague. He may cut classes if he likes. He may go up for his examinations at the end of a normal period or postpone them if he wants to. As a rule, the examinations are far fewer in number than in America. Thus he can divide his time as he thinks best. As a result some students may waste time. But the bright student with a strong character usu-

ally profits from this system by devoting himself to his private studies. Others may spend a year, partly or wholly, in social activities. The Dutch intellectual—and the same is true for the German and the French—never was and never will be as free as during the time of his academic study.

I do not pretend to possess the psychological insight to decide whether in the long run sound development of the human character is served better by a system of early regimentation followed by freedom at a maturer age or by the opposite American system. The European is often impressed by the dash and dare of the American child, though he may have his opinion about the undisciplined behavior that sometimes goes with it. The American observer may be struck by what probably seem to him the licentious habits of some students in the Netherlands. It is hard to decide which of the two systems creates greater strength of character or conduces to a more stable mode of life. It seems that the mature American is better able to assert himself, but I am not so certain about his style of life. This question is hard to decide because difference in style often impresses the foreigner as lack of style.

If there is a deficiency in this respect in the American student, it certainly is compensated by an attractive open-mindedness. I noticed this quality in several students, and it was one of my most pleasant experiences in this country. The democratic tendency to give rank less emphasis than it has in Europe may account for this also. As a matter of fact it is much easier and much more usual to have friendly relations with students here than in my own country. Possibly this may be the case because the visiting professor has no official influence upon the student's career and can thus establish a more casual relationship with him.

The American student has another advantage over the Dutch in that he usually is better able to draft papers. It seems that the training he acquires from the elementary school onward serves to develop this faculty. One may sometimes find more thoroughness in the papers of the Dutch students, but one seldom sees a clumsily organized American paper, even though there may be deficiencies in the use of English.

MY LIMITED experience forbids me to compare American and Dutch students in their command of their mother tongue, but I have something to say about foreign languages which, I am afraid, is going to be on the debit side of the American educational system.

Let me state first that great nations usually do not stress the learning of foreign languages so much as smaller nations have to do. Great world powers seem to be more or less self-sufficient so far as language is concerned. There has been one notorious exception: Czarist Russia. The intellectuals of that country have been famous for their talent and ability in reading and talking foreign languages, in particular French. Things are different in present-day Russia, so far as I know. The English-speaking nations, least of all, feel the need of learning other languages, since English is the first world language nowadays. This implies that probably more books have been and are translated into English than into any other language. This is what

makes learning foreign languages seem superfluous in the eyes of many people. For most Americans, living in their vast country which is almost a continent, the practical need of learning another language is negligible. Which one should they need? French has ceased to be the world's first diplomatic and cultural language. The inclination to learn German has decreased for obvious reasons. Spanish is geographically, and maybe commercially, important; not so much so culturally now. Difficult languages like Russian and Chinese, though spoken by nations of hundreds of millions, can be learned only by a few specialists.

It is obvious, therefore, that there is not much urgency in this country to make the study of one foreign language obligatory in high school. Since about fifty per cent of all children go to high school, it is not feasible either. The big drawback, however, is that the courses in foreign languages which are offered often are not first rate. The main trouble is that in most cases the foreign-language teacher is not required to have real qualifications for his work so that persons who have not even majored in a language may teach it. The colleges and universities offer courses in foreign languages of a better quality, but a good reading knowledge of a foreign language takes at least four years' training, if not more. The American student seldom is able or willing to devote that much time to acquiring it. The result is that he may be able to decipher a fairly easy text, but his tempo of reading and understanding is too slow to allow him to use the language as an implement for his research. I know that Ph. D. candidates have to comply with more severe requirements in two or three foreign languages, but this comes rather late. It is pretty hard for a young man not trained in grammar to make himself familiar with it at a rather late age. It takes a long time to get acquainted with a language. Would it not be better to start learning at the age, say, of twelve or fourteen years, when the mind is still quite flexible and susceptible?

So far I have discussed languages only as a tool for research. There is another argument for the increase of the study of languages in this country. Since the United States has passed the period of "splendid isolation" and has been entangled, willingly or unwillingly, in world affairs, the necessity of understanding other nations and their civilizations has become more urgent than ever before. No insight into the spirit of a different nation is possible without an adequate knowledge of the semantics of that nation, of the ways in which it expresses itself. This cannot be left entirely to a few experts. In a democratic country, where public opinion counts for so much, there should be broader groups of people who are able to read the literature of one or another nation, and through it gain a better understanding of its culture. Thomas Garrigue Masaryk, the first president of the Czechoslovak Republic, explains in his book, *The Making of a Nation*, how his reading of French, English, and Russian literatures helped him in making propaganda for the sake of his Czechoslovak nation with the Anglo-Saxon, French, and Russian peoples during the First World War, when he had left his own country and was traveling around

in the Allied countries. Not everyone can be a Masaryk, I know, but it certainly would be beneficial to American foreign policy if larger groups of the public in this country had a better understanding of foreign cultures.

To further this end inevitably means to put a heavier burden on the educational program. The example of many smaller nations proves, however, that it is not impossible to carry it. An international community, which we need now more than anything else, cannot be built up without a great increase in mutual understanding.

IN A general sense there is a strong community feeling and community spirit in this country. I believe that it is stronger in some respects than in many European countries. I am thinking of Rotary and Kiwanis clubs, women's clubs, and many others. What is the comparable situation at the universities? I cannot answer this question in general for lack of experience. I can only give some personal impressions.

It seems to me that a small college, especially a denominational college, has a definite advantage over a large university in respect to community spirit. I visited a few of these colleges in Western Michigan, and I was impressed with the sense of unity and brotherhood reigning there. It reminded me of the Dutch high school (lyceum) at which I taught for several years. I noticed the same friendly relations between faculty members, and also between faculty and students, the same love of the institution as a whole, and of teaching as a vocation.

At the university where I taught during the academic year 1950–51 the situation appeared to be somewhat different. The diversity of schools and departments and, above all, the size of the institution as a whole obviously were impeding the development of a close spirit of community. Moreover, the schedule of the faculty and the students was so tight that there was little time left for social intercourse. True, this is an international disease, but it seemed that conditions were exceptionally bad in this case.

I cannot go deeply into a comparison between my home university at Leyden and the University of Michigan, where I served one year as a visiting professor. Considering, however, that Leyden has only about 180 professors and other faculty members and about forty-five hundred students, it is obvious that it can have more real unity than an institution with about twelve hundred faculty members and eighteen thousand students.

Even so, Leyden and other Dutch universities have felt that they have been drifting away from the old idea of a university as a strong community. The common share in the resistance against the Nazi occupation has created a striving for a new community feeling among professors and students, in which the alumni are included as much as possible. It has been implemented in new forms of closer co-operation between students and faculty. The attempt has been made to found it upon a sort of declaration expressing the spiritual principles and aims of the university in a Christian and humanitarian sense, and the responsibility of the university and its members toward society. It has expressed

itself through the institution of general courses for all students, called *studium generale*, mentioned before. The results, so far, still fall behind expectation, but a beginning has been made. Apart from this, traditional forms of ceremonies and social meetings are kept to provide a way of life and strengthen the community feeling.

I did not notice very many of these things at the American university where I have been working. I took part, of course, in meetings of all sorts, at luncheons, at the faculty club, and so on, but it did not appear to me that the university as such was a living idea as it is in Leyden.

The bigness of the American university tends to make it a plant of mass production of courses, examinations, and marks. Quite a few of these examinations restrict themselves to short-answer questions and avoid essay questions, because there is no time to correct them. It seems that a system has even been developed to calculate the results of an examination by way of a computing machine.

It is needless to say that things like these enhance impersonalization. However, the system of personal counseling and faculty advising, and the large number of instructors and teaching fellows, make possible some degree of personal contact between student and faculty. As far as I can see there is more of it than in my country, generally speaking. The independence of the Dutch student accounts for this, partly, and the absence or near absence of the equivalent of instructors and teaching fellows, for traditional and economical reasons. Also, there is the greater deference to rank mentioned previously.

I HAVE been discussing the differences between American and European, in particular Dutch, universities. In many ways they seem to be so great as to make a comparison almost impossible. Two questions remain to be answered. Must it be concluded from my comparison of the two systems of higher education that the American is inferior to the European, as many Europeans assume? And, second, is there any possibility of taking over the most valuable elements from the educational system of another country and combining them with the best elements of one's own national system?

The answer to the first question must be negative. As I have put it on another occasion, the top-ranking faculty and the graduate students at an American university are of as high a level as elsewhere, except for the knowledge of languages. The chief difference is that they are surrounded by a vast quantity of lower levels.

The second question cannot be answered unqualifiedly. Education, perhaps more than all other institutions in a country, seems to stick to tradition. It has grown up and developed within the special conditions of that country. Its forms are rigid and hard to change. However, if we do not want our traditional institutions to be fossilized, we shall have to strive for betterment. The needs of a changing society demand that we do. It might be one of the favorable results of the exchange of professors and students if, through an interchange of experience, America could learn something valuable from Europe, and Europe from America.

A "Terminal" Course in Philosophy

By C. J. DUCASSE

The Introductory Philosophy Course at Brown University

THE course this paper concerns is a semi-required course which has been given at Brown University for seven or eight years, and which has numbered from a little over three hundred to more than six hundred students. A word of explanation is called for at the outset by the fact that, in the title of this paper, that course is referred to as a "terminal" course with the word "terminal" between quotation marks. These are meant to indicate that the course is not necessarily, but only in fact for the great majority of the students in it, the last course in philosophy which they will take.

The course, however, is not only terminal in this sense but is also initial in that it is the first course in philosophy which the students in it have taken. It is therefore an "introductory" course. But it is not so in the sense that it is designed to lay the foundations or provide background for more advanced or more specialized work in philosophy. On the contrary, the aim is to make the course wholly self-justifying; that is, interesting and enduringly useful to the students who take it, even if, as in fact is the case with the majority of them, they never take any other philosophy courses.

Before the content of the course and its rôle in the curriculum can be more particularly described, it is necessary to say something about the curriculum of which it is a part; and, even before this, something about the sort of education called "liberal," which that curriculum was devised to implement.

Probably, more than one of my readers has been a member of the curriculum committee of the institution where he teaches, and will therefore have had experience of the process by which, in most cases, the curriculum of a college of liberal arts comes to be what in particular it happens to be. Proposals for changes in the offerings of courses in the various departments are laid before the committee by representatives of the departments concerned; and it is natural for the committee to assume that, after all, the staff of a department is likely to know better than can members of other departments what courses it should and can offer in order to perform its academic function. Hence, generally, unless the proposal made seems outlandish, or seems to infringe on the domain of some other departments, or would require the appointment of additional teaching personnel, the reasons furnished for the proposal tend, after a few questions, to be accepted as probably valid; and the change proposed is approved.

In this way, the curriculum changes little by little, in a way which on the whole can hardly be called systematic. The fact, I think, is that usually few of the members of the faculty of a college of liberal arts have any explicitly thought out conception of what a liberal education is, or of the particular sort of utility or other value which a liberal education possesses as distinguished from other kinds of education. I fear that, by a liberal education, most members of most faculties mean little more than the sort of education that results from study of the variety of subjects traditionally included in the curriculum of a college of liberal arts. But what all these subjects have in common, which qualifies them all as contributors to a liberal education; or what specific rôle in such an education a particular subject or a particular course plays; or how relatively important or unimportant may be the rôle of one as compared with that of another—all these questions are ones concerning which college teachers commonly have only vague answers if any.

This state of affairs entails that such changes as are made in the curriculum are probably made in most cases chiefly on what may be termed an impressionistic rather than a systematic, reasoned basis. That is, it is "felt" that a given change would be somehow "a good thing." But why specifically, from the standpoint of the nature and aims of a liberal education, the change concerned would be good, or better or worse than some particular alternative, is seldom clearly thought out. Decisions tend rather to be made on the basis of narrowly empirical, short-range considerations.

BY A fortunate combination of circumstances into which it is not necessary to go for present purposes, the new curriculum which Brown University adopted in 1947 for its college of liberal arts was based on an explicitly formulated conception of the nature and specific value of a liberal education as distinguished from, for example, a vocational or a scientific education. The major premise of that conception was that a liberal education is not so much, as perhaps in the original Aristotelian meaning of the term, simply the sort of education suitable for men in so far as they are free politically and economically; but, rather, the sort of education which confers upon men already possessing a measure of these two outer freedoms, also freedom from two subtle but widespread forms of inner bondage.

One of these is bondage to the passion, the impulse, the whim, or the temptation of the moment. The key to freedom from this bondage is self-discipline. The colleges can contribute something to it, but the responsibility for it does not rest especially upon them. They share it with other agencies, the chief of which are probably the family and religion.

The other form of inner bondage from which a liberal education tends to liberate man is the bondage in which he is held by ignorance, by prejudice, and by narrowness and shallowness of outlook. The colleges of liberal arts are the special instruments for this part of a liberal education. Their task is to free the student from these particular chains by making him aware of them; to give him a comprehensive view of the ranges and levels of human knowl-

edge, achievements, and capacities; and to develop in him an appreciative insight into the variety of values for which human beings live. In short, the essential aim of the kind of education a college of liberal arts exists to provide is to endow its students with perspective.

The particular sort of freedom which perspective brings is freedom of choice and of judgment. Such freedom consists in having a choice; that is, in being aware of alternatives. The man who knows but one course, or sees but one aspect of things, or appreciates but a limited range of values, has no choice or little choice as to the direction he takes. Unaware of his own blind spots and prejudices, he is held by them in an invisible jail. The essential task of a liberal education is to break down its walls. Only to the extent they are breached does a person have what Dewey describes as "hospitality of mind, generous imagination, trained capacity of discrimination, freedom from class, sectarian or partisan prejudice and passion, faith without fanaticism."

That the characteristic function of a liberal education is to generate perspective—or, to put it otherwise, that an education is liberal in proportion as it brings perspective—is the assumption which, even when it is not explicitly recognized, tacitly governs the general practice of having in the liberal-arts curriculum, besides a language requirement and some free electives, also, and indeed as chief constituents of the curriculum, a concentration requirement and a distribution requirement.

The function of the concentration requirement is to develop perspective in depth. This is gained through intensive work in some limited chosen field. Such work gives the student insight into the difference between merely superficial and external knowledge of a subject and internal, relatively thorough and effective knowledge of it. By his work in concentration, the student comes to appreciate what it means, really to know something, and how much effort and care it takes.

The distribution requirement, on the other hand, aims to give him perspective in breadth. This comes from acquaintance with the variety of fields of human experience, with the possible types of interest in a given subject, and with the special mode of approach relevant to each type. The perspective so obtained is analogous to that which one gains from careful study of a map. There is no substitute for the kind of knowledge this yields. It is, of course, superficial in the sense that it is knowledge mostly of the main external features of things and of their mutual relationships. But it is not superficial in the sense of being inadequate to the purposes for which it is sought. For these, the type of information which a map provides is indispensable. No degree of thoroughness of merely local knowledge can take its place.

To provide effectively perspective in breadth, however, the distribution requirement needs to be substantially more extensive than it commonly is; also, its content needs to be diversified in a more systematic manner; and especially, the courses which constitute its content need each to be designed specifically with a view to the function of the distribution requirement. This last desideratum means that each of the courses offered for the purposes of that requirement should deliberately be

devised as a terminal course in the sense I stated at the outset of my remarks. For it is certain that the great majority of the students will take no additional course in the same subject. Hence the question which should guide the construction of each distribution course is, What, in its field, are the things most important for an outsider to know? This is what the late President Lowell had in mind when, in his inaugural address, he said that

> . . . there ought to be in every considerable field a general course designed to give to men who do not intend to pursue the subject further a comprehension of its underlying principles or methods of thought. . . .[1]

Before considering more particularly the distribution course in philosophy, I must add to these remarks concerning the nature of a curriculum for a liberal education a word concerning what is called integration. When a curriculum has been deliberately constructed in the manner just described, then functionality has automatically been built into it; and the only thing further needed to integrate in the student's mind the knowledge he is gaining is that both the teacher and the student shall at all times be clearly aware not only of the reasons which dictated the form and content of the curriculum, but also of the particular rôle in the liberalizing of the student's outlook intended to be played by the particular work in which the student and his teacher are engaged at the moment. Provision to ensure such awareness should be made in the curriculum itself.

[1] "Inaugural Address, October 6, 1909," *Atlantic Monthly*, CIV (November, 1909), p. 692.

I COME now to the question as to what, for the purposes of a liberal education, should be the content of a distribution course in philosophy. It is probably safe to say that more than one teacher of philosophy has at some time been shocked by the ignorance or the misconceptions of some of his colleagues in other fields, concerning what philosophy is, and what it is or is not good for. Ignorance or misapprehension as to this, of course, stands in the way of intelligent decisions as to the place of philosophy in the curriculum. But such ignorance also makes evident that the course in philosophy, if any, which those colleagues of ours themselves took as undergraduates decidedly failed to perform the function I have described.

The course they took is likely to have been of one or the other of two types, widely employed, but both unsuitable, I think, for the purpose in view. One of them is a course in the history of philosophy. The impression most students are apt to carry away from it is that philosophy is a museum of outdated or queer ideas, perhaps occasionally intriguing as brain teasers, but of no discernible practical value. The other common type of introductory course is systematic rather than historical, and attempts to give the student some understanding of what are Idealism, Materialism, Interactionism, Monism, Pluralism, Pragmatism, Positivism, Realism, and so on. This kind of course, too, is, I think, inappropriate to the function I have described; for it is likely to leave the student with the idea that philosophy is little but a collection of artificial or

largely insoluble problems, which philosophers debate and dispose of by giving high-sounding technical names to the solutions they seek but do not really have.

In contrast with these two kinds of introductory courses, the course we have been offering at Brown to satisfy the distribution requirement in philosophy stresses throughout the fact that philosophy, or more exactly philosophical reflection, is an activity natural to man; that it occurs spontaneously in almost any man on occasions of certain kinds even if he is unaware that what he is then doing constitutes philosophical reflection; and that this kind of reflection performs practical functions that are of strategic importance in his daily life.

The course is a two-semester one entitled "Philosophy and the Types of Human Experience." It is part of a distribution requirement which, in the curriculum adopted in 1947, comprises 16 semester courses. Of these, six are in the sciences, four in the social studies, and six in the humanities. The student can omit only two out of the sixteen. This means that, if he omits any two of them other than philosophy, then the philosophy course must be included in his distribution program.

The course is populated mostly by Sophomores, but is open to Freshmen and to Juniors; and, exceptionally, two or three Seniors take it. Usually, the Freshmen in it are from the upper part of the freshman class, and our experience has been that they do about as well as the Sophomores. The course is taught in lecture sections averaging about one hundred students. There are three meetings a week, of which two are lectures. For the third meeting, the class is divided into discussion sections of about twenty students each, and is conducted by graduate assistants.

THE two semesters' work is divided into seven parts. Part I is introductory, and the other six deal respectively with morality, art, education, science, religion, and metaphysics. As I name these topics, I want to emphasize that what is primarily discussed under each is concrete problems which have already confronted the student in his own experience. For example, in Part II of the course, it is moral judgments, not ethical or axiological theories as such, which are the topic. Theories are brought into the discussion functionally—as means for the solution of moral problems that have already thrust themselves on the student. Similarly, in Part V, the topic is not Philosophy of Science, but Science; that is, knowledge and the process of attaining it. The discussion of it, of course, constitutes philosophical and, more specifically, epistemological reflection. But what is reflected upon is science, not epistemology.

Part I is covered in three or four meetings and is devoted to describing and illustrating the sort of occasions on which any person is likely to engage spontaneously in philosophical reflection. The contention presented is that this happens on occasions that have all three of the following features: First, they are occasions on which two or more evaluative judgments of the same thing conflict—either within one person's mind or as between him and another person. Second, they are occasions when the

divergence of the two or more evaluations is not due to difference of objective information about the thing judged, but is truly a difference of evaluation of one and the same thing. Third, they are occasions when a rational solution of the conflict is desired, not an arbitrary solution or one that merely by-passes the conflict for the sake of immediate expediency.

When an occasion is of this threefold kind, then philosophical reflection is reflection that seeks to answer two questions. One is, whether the thing evaluated is of a kind to which either of the conflicting evaluations is congruous. An example where it would not be congruous would be the question: Is it moral or immoral to scratch oneself when one itches? What reflection would seek to discover in this case therefore is, What characteristics must something have in order that evaluation of it in terms of morality or immorality be relevant?

The other question which, on occasions of the threefold kind described, thrusts itself upon philosophical reflection is, What exactly does each of the conflicting value-predicates employed mean? For example, what exactly is meant by calling a given act "moral," or "immoral"?

The use of such examples in the introductory part of the course makes it psychologically expedient to devote Part II of the course to a discussion of morality. Some six weeks are given to this. First, some concrete instances are mentioned in which moral judgments actually conflict sharply; for example, mercy killings, capital punishment, a physician's lying to his patient for the patient's own good, and so on. Then, some of the possible bases on which rational solution of such doubts seems possible are described, and the reasons for regarding some one of those possible bases as the best are presented. In this part of the course, the attempt is made also to present clear and rational answers to such questions as that of free will and determinism and its relation to moral responsibility; again, to the question of the sense in which morality is relative, and the sense in which it is not; the question of whether every action is really selfish, and the true distinction between egoism and altruism; the question of what good and evil ultimately consist in, and the distinction between being intrinsically and being instrumentally good or evil.

All these are questions interesting to the student because they relate closely to some of his personal problems; and, by avoiding technicalities as far as possible, it is practicable even in six weeks to set forth rational answers which will remove much of the obscurity and confusion that always exist in the student's mind concerning these matters.

Part III of the course deals with Art and Aesthetic Experience. Some three weeks are given to this. Examples are brought in of concrete occasions on which disputes spontaneously arise as to whether some given thing is or is not a work of art; as to what art is good for; as to what "good" and "bad" mean as applied to art; as to whether any person can decide authoritatively that a given thing is or is not beautiful, or is more or less so than another; as to what service, if any, art critics render; and as to whether censorship of the arts is warranted, and, if so, how far

and on what grounds. In each case the attempt is made to present some clear, rationally defensible answer to the doubts these questions voice.

Part IV, to which approximately three weeks also are given, considers Education. Here again, the discussion is directly addressed to the student's own educational experiences and to his present or prospective educational problems. He is invited to scrutinize the education he has had, and to state what merits and defects he thinks it had. His attention is called to the fact that the education he has gained in his classes has been mostly intellectual education, but that there is, besides this, also moral, physical, aesthetic, and religious education, education in manners, and education of still other aspects of the personality of man. And enough is said to make the student realize the general nature of each of these types of education, the sort of means appropriate to each, and the importance of each. Then liberal education, as distinguished from vocational or professional, is considered. The conception of liberal education and of its utility, set forth earlier in this paper, is presented; and the curriculum of the college of liberal arts, as implementing it, is studied. In this way, a desideratum mentioned earlier is met—namely, that the student shall, throughout his college course, be aware of the particular contribution to a liberal education which the work he is engaged in at any given moment is intended to make.

Parts V, VI, and VII of the course comprise the second semester's work. Some five weeks are given to Part V, which deals with Science. It is pointed out that "science" comprises not the natural sciences only, but all knowledge that has certain characteristics, which are described. Knowledge, as distinguished from mere opinion, is defined as belief based on evidence sufficient to establish the truth or probability of what is believed. Something is then said about the nature and criteria of truth; as to the distinction between rational grounds for belief, and psychological causes of belief, such as suggestion, indoctrination, wishes, and fears. Then the main types of evidence are described and illustrated: perceptual, testimonial, circumstantial, inductive, and deductive. Finally, something is said about the main features of scientific method, including observation, measurement, experimentation, hypothesis, and verification; and about the part which the construction of theories plays in science.

Part VI, to which about four weeks are devoted, deals with religion. The chief aim here is to get the student to start with his own religious experiences and reach from them an understanding of the nature of religion in general. This means, to discern the typical functions, both personal and social, which all the religions verifiably tend to perform; to notice the forms of belief and of cult which implement those functions; and to consider the main types of religious experience, including conversion, prayer, and mystical states. The classical arguments for the existence of God are set forth and examined; and something is said about the problem of evil and about the belief in a life after death.

The last four weeks of the course are given to Part VII, entitled Meta-

physics. In it, an attempt is made to give the student an idea of the manner in which the kind of problems called metaphysical come to force themselves upon the attention of ordinarily reflective persons, even if they do not know those problems under that name. The general nature of the proposed solutions termed Materialism, Idealism, Dualism, Pragmatism, Positivism, is then explained. Technicalities are avoided as much as possible, even here. But terms such as these are frequently encountered outside works on philosophy, and any liberally educated person should have sufficient acquaintance with the main features of the positions those terms designate to enable him to understand such references to them as he is likely to come across in his general reading or in conversation. This is the chief utility this part of the course aims to have, since most of the students in it will make no additional formal study of metaphysics.

FOR some years I have not myself given the course I have described; and my colleagues, who have been teaching it since, have made some changes in it from year to year. But the intended function of the course, and its general content and method, remain essentially the same.

Concerning the course as a whole, it will of course be said that the time given to each topic is short. Yet each teacher of philosophy knows very well that, even in a single carefully planned and well-prepared lecture on such a topic as morality, or science, or religion, he could do a good deal to remove some of the confusion on any one of these subjects which reigns in the minds of most persons. That, in spite of the limited time available for discussion of the variety of topics listed, the course has turned out to be exceptionally successful, would seem to be shown by the effects it has had on other parts of the work of the department of philosophy. For example, whereas in the years before that course was inaugurated the numbers of students majoring in philosophy averaged from 10 to 12, the present number is 46.

Again, although during the last seven years the total enrollment in the college has gone down, and therefore likewise the enrollment in the philosophy distribution course, nevertheless the enrollment in advanced philosophy courses has consistently gone up, both absolutely and percentage-wise. For example, if one compares the first semester of 1947–48 with the first semester of 1952–53, the total college enrollment has dropped about 32 per cent, but the enrollment in the advanced philosophy courses has risen by almost the same percentage. Again, comparing the same two semesters, about 4 per cent of the students in the university enrolled in elective philosophy courses seven years ago; whereas in the current academic year the percentage is a little over 8 per cent; that is, about twice as high. These various figures appear to indicate that the course I have described, although, or perhaps because, designed as a terminal course in the sense stated, has been notably effective in increasing the interest in philosophy among the students of the college.

On Writing the History of Land-Grant Colleges and Universities

By EARLE D. ROSS

Description of Interplay of Social Forces Preferred to Episodical Chronicle

AMERICAN colleges and universities, both venerable and youthful, are becoming historically conscious. During the past few years the great majority have found occasion, usually in connection with anniversaries, to tell or retell the story of their particular response to the American aspiration for higher learning. The productions range in extent from modest brochures to multi-volume series, and in content from episodical reminiscences and factual chronologies to lucid and critical narratives. In most cases institutional presses have provided appropriate and competent publication.

Land-grant colleges and universities, while in characteristic features dating only from the newer educational dispensation, have nearly all presented their life stories. However brief the experiences, when recorded with fullness and critical understanding of generative as well as propellent forces they have much of value both for educational and general institutional development. For the social historian, the origins and developments, in their varied reaches and relationships, of a representative member of an indigenous type of American higher education should afford a stimulating and rewarding theme. At the same time it is one of peculiar complications.

Bibliographical surveys of selected institutions have found extensive official archives, but the full sources must be sought far beyond the intramural records. Thus the genesis of the movement is to be found not so much in formal educational theory as in the social agitation and aspiration of the middle period. The Industrial Movement in higher education was a natural and appropriate manifestation of this era of protest and reform that an awakening intellectual outlook of the Western world aroused in an expanding and aspiring nation. Whether the consequent political and social upheaval, symbolically designated Jacksonian, arose more from mill lanes and sidewalks than from grass roots and clearings, as revisionists have maintained, both interests were actively concerned.

Farmers were becoming increasingly aware of a disparity, economically, socially, and politically, as can be noted in addresses before state and local societies, in the discussions of farmers' clubs, and in letters and editorial comment in the agricultural press. Concerted protest was delayed by lack of industrial and business

specialization and of consequent corporate dominance, by sectional division of the main groups, and, especially, by expanding resources and growing markets which seemed to give the agricultural ladder security and permanence. Meanwhile, education, it was felt, would hasten and facilitate the climbing. No less, labor, still more wage than class conscious, was convinced that knowledge gave power not merely to gain craft competence but to rise to proprietary status.

In a period of accelerated change through new techniques in production and new forms of business enterprise, ambitious young men of humble origin aspired to leadership in the new industries and utilities or in the professions by means of technical training. The "industrial classes" for whom the new education was sought could thus include all groups of the educationally underprivileged. And this objective applied to social no less than to economic disparity.

Equality of educational opportunity, both general and professional, was basic in the feminist movement and "justice to woman" became a prime endeavor of leading educational reformers. To the abolitionist members of the movement, racial equality seemed as logical as that for the sexes. Little was secured before the Morrill Act, under which a few states made concessions. But the supplemental acts in education, research, and extension provided for equivalent opportunity. In spite of the controversies, regional and interregional, occasioned in the efforts for compliance, undoubtedly the land-grant movement in its various activities has provided the most expedient and realistic adjustment of the rival educational philosophies of Booker Washington and W. E. B. du Bois.

IN THE search to democratize special training at different levels of attainment and maturity, numerous ventures in popularly adapted instruction both in Europe and America provided models and precedents. Foreign experiences were certainly to be found in the Fellenberg schools, the British mechanics institutes, the Christian unions and the Workingmen's College founded by the Christian Socialists, and, in one special branch, the Royal Agricultural College at Cirencester. At home there were pertinent exhibits in the early log colleges, the lyceums, mercantile libraries, manual-labor academies, the People's College of New York, the Farmer's College of Ohio, the Franklin Institute of Philadelphia, and the Cooper Union of New York. These institutions merit fuller study for their influence on the origins and direction of land-grant education.

To make the new education appropriate and acceptable to an ever widening constituency, drastic changes in content and method were demanded, particularly in preparation for and adjustment to the new society and economy. The steady decline in the traditional collegiate education facilitated the changes.

In the formulation of the new education there was the inevitable conflict of aim and interest between the broad-gauge scientists who proposed both to widen and strengthen higher education in content and method and the narrow-gauge, practical-minded innovators who were mainly concerned with popular adap-

tation even at the expense of thinning and trimming. The gradual, highly pragmatic solution came with the recognition that both objectives were implicit in the land-grant philosophy.

Thus the developed system included, at the one extreme, full technological universities extending to the graduate level and, at the other, practical short courses in a great variety of interests and systematic extension demonstration and participation. The land-grant college and its forebears have thus made one of the earliest and most realistic approaches to the major problem of adult education.

From their side, the scientists were direct participants in the change of thought by which, in the words of Sherwood Taylor, "the civilized world convinced itself of the value of science as a means of explaining the physical world and as a means of getting things done." Many more studies must be made in the developing history of science and technology to appraise the influence of land-grant teaching and research upon the transition from natural history and natural philosophy to the formalized basic sciences, from rule-of-thumb empiricism to scientific husbandry, and from elemental mensuration and mechanics to the emerging branches of engineering.

Dirk Struik's introduction to early Yankee scientists and the Smallwoods' unique interpretation of the mental outlook of the naturalist provide a background for the studies of pioneer botanists by Andrew D. Rodgers, of chemists by Edgar F. Smith, of geologists by George F. Merrill, and of entomologists by Henry B. Weiss and Herbert Osborn. For peculiar developments in the social sciences, Henry C. and Anne D. Taylor's source history of agricultural economics and Charles J. Galpin's personal sketches of the beginnings of rural sociology point the way to more intensive study. The biographies of key leaders such as Benjamin Silliman, Amos Eaton, Joseph Henry, Louis Agassiz, O. C. Marsh, William B. Rogers, Robert H. Thurston, and Ellen Richards are all revealing for formative influences.

More and fuller institutional histories are no less essential. In addition to the histories of the pioneer Rensselaer, Sheffield, and Lawrence schools, fuller studies should be made of the science courses at Union, Brown, Amherst, and others of the old-line colleges. The investigations of the controversial James J. Mapes and the rather tentative profession of "agricultural consultants" carried on by members of his "school" should have fuller and more impartial evaluation. Since so many early land-grant professors were drawn from that profession, the basic science training in medical schools during the formative years should be critically examined. The findings of early scientific explorations, state geological and natural-history surveys, the geodetic and coast surveys, the botanical and plant explorers, and the scientific work of the Patent Office, the early Department of Agriculture, and the Smithsonian Institution are all essential for tracing the stages in the study of the sciences and their applications. The little-known project of the 1840's for a national graduate school of science at Albany, New York, to which it was hoped to attract Liebig and other world-famous leaders, while

hopelessly premature, was symptomatic of growing aspiration.

The interrelations of American scientists with European centers of research at Giessen, Leyden, Edinburgh, and Rothamsted await adequate explanation. The symposium of the American Association for the Advancement of Science on the work and influence of Liebig is informing and corrective. The writings and correspondence of Samuel W. Johnson, Evan Pugh, William H. Brewer, and Eugene Hilgard provide rich sources. The reports of the travels, at home and abroad, of Henry Colman, "the American Arthur Young," merit critical editing.

OF THE fields of instruction prescribed in the organic act, the military, in formative and continuing development, has been the most neglected by land-grant historians. The emphasis reflects the sporadic and episodical public interest before the world-war era. The organization and technique of the training of state militias and the development and distribution of military academies at the beginning of the Civil War need investigation. The contemporary aims and expectations and the various interpretations and degrees of compliance in years of peace should be revealing for changing public opinion regarding internal and foreign security. No less, the conflict of administrative ambitions for federal support of full military schools with the jealousies of leading technical departments, as well as with the native apprehension of militarism, suggests a significant aspect in federal-state relationships and a background for recent defense issues.

General education, positively and negatively, has been a concern of land-grant educators from the beginning. The new colleges started with an old-line curriculum, only slightly modified and extended to include the rudimentary applications, in which some brand of metaphysics might be prescribed along with the general sciences for the student of agriculture, and Latin included in the training of the engineer.

From this lowly and often humiliatingly subordinate position, the technical subjects came fully into their own with the demands and opportunities of the new industrial age. The extreme vocational reaction reached its peak in the early years of the present century—the "progressive" era when high schools were functionalized in the name of democracy and "education for efficiency" was a magic slogan. In the zeal of newly gained power there were determined efforts in a number of cases to abolish the general divisions and to limit the basic sciences to the strictly "supporting" subjects. The proscribed group, held to be unsuited to technological instruction, were invariably disparaged by the opprobrious designation, "liberal arts," even in a period when the A. B. in many old-line colleges carried a heavy loading of vocational arts and was quite innocent of the original seven. Fortunately, wiser counsels stayed such rash reversions until the scientific and social demands of peace and war, prosperity and depression, brought a sounder view of technical competence and leadership, as well as the recognition, here as elsewhere, of the essential place of general

[*Continued on page 451*]

College and the Years After

By LEONARD JORDAN WEST

Report of a Survey of Two Groups of Graduates of New York City Colleges

MORE than one-quarter of all students attending college in New York City are enrolled in the four free municipal colleges under the jurisdiction of the Board of Higher Education: City College, Hunter College, Brooklyn College, and Queens College. With so large a responsibility for higher education in New York City, with such large numbers of students and such a vast variety of needs and interests, the question arises: Are the colleges meeting these needs? What have the post-graduation experiences of our students been? In the light of their experiences what curriculum revision is indicated? What is the extent of the need for graduate work? In what areas of study? What are the aims and hopes of graduates, their testimony as to the relationship between education and work, as well as between education and the less tangible outcomes in personal values—social, ethical, cultural, and spiritual?

To answer these and corollary questions the Office of Research and Evaluation of the Division of Teacher Education[1] was requested by the Board of Higher Education to conduct a mail questionnaire survey of the careers of municipal-college graduates.[2] During the latter half of 1950 the entire graduating classes of June, 1941, and June, 1947, numbering 5,865 men and women, were sent the questionnaire. Returns were received from 54.6 per cent of the graduates, from 66.1 per cent of all those whom the postal authorities were able to locate. Responses were found to be representative of the entire group, both respondents and non-respondents.

Almost thirteen hundred college men and women in their early thirties and more than nineteen hundred college graduates in their middle and late twenties—what have their life experiences been during the nine or three years since they graduated from college? What work do they do? Do they use their college specializations on their jobs? How much do they earn; and do those who use their college training on their jobs earn more than those who do not? Do they like their jobs? What do they expect to be earning and doing at the age of fifty? Do they return to school for graduate work? For what purposes? What are the values they derive from their college education? What do they believe will improve college curriculums?

[1]The Division of Teacher Education is the fifth component of the College of the City of New York. It was created in 1948 by the Board of Higher Education to co-ordinate teacher-education programs in the four municipal colleges.

[2]The conduct and reporting of this survey were the major responsibility of the writer, under the general guidance of Jacob S. Orleans. The study, *College and the Years After*, has been published by the Board of Higher Education of New York City.

The survey contains some answers to these and a host of related questions, both with respect to these municipal-college students in particular and with respect, probably, to college graduates all over the country.

The selection for survey in 1950 of classes graduated in 1941 and 1947 offers a study of college graduates at two points in time after graduation and thus makes possible the identification of trends, of areas of stability as well as areas of change and flux. Because the graduates include both men and women—in almost equal numbers, in fact—this survey reveals provocative differences in the experiences of the sexes and raises many questions concerning the appropriate education for women. Often the facts do not furnish answers but, rather, identify the proper questions.

Men and women graduates marry in equal numbers and, when allowance is made for age differences, they have children in approximately equal proportions. Divorce is rare (less than 1 per cent). They have remained in New York City, where they went to college. Three or nine years after graduation they are almost all still New Yorkers—four out of five of the older graduates, nine out of ten of the younger ones.

They are graduates of the largest municipal college system in the country—a group of colleges offering sixty-five different major fields of specialization. However, business, social studies, and science attract more than three-quarters of the men; education and social studies more than half the women.

They leave college with a wide variety of equipment, ready in varying degrees for a wide variety of jobs. They find work readily; unemployment is very rare. But they are, plainly, not equally successful.

IT'S a man's world. Although most of the graduates had hoped to use their college specialization on their jobs, men more often do so than women. Men earn more—much more—in almost every occupation. Variations in earnings between the sexes grow larger as the years pass. Whereas $300 separates the annual earnings of men and women on their first jobs, an $800 difference appears three years after graduation. When graduates are out of school nine years, men earn almost $5,000 annually, women $3,400, a difference of more than $1,500. In fact, men earn more after three years than women do after nine years.

Of further interest to those concerned with the higher education of women is the fact that half the women do not major in fields directly applicable to vocations; they attach less importance to earnings as a source of job satisfaction. Taking into account the longer occupational history of women (because of the three-year interruption for military service for the men), women have not held their jobs as long as have the men. They seem to be less "settled" occupationally.

Furthermore, there are substantial occupational differences among graduates in various undergraduate areas of study. The stubborn fact is that both men and women whose college majors have vocational applicability (engineering, business, science) much more frequently get jobs related to their studies than do majors in arts or social studies. Of the graduates

who majored in education, large numbers of women are teaching in elementary schools, but few of the men are teaching—evidently they cannot afford to. During the war, only the engineering, business, and science majors were assigned in any sizable numbers to duties which used their college specializations.

Not only do business, engineering, and science graduates more frequently find jobs in their fields, they earn more money than do graduates in arts or social studies. Such differences are more marked for men than for women, greater for the 1941 graduates than for the 1947 graduates. In fact, the range of median salaries for men who studied in various college fields is four times the range of women's salaries. Less than $500 separates the annual earnings of women liberal-arts majors from women business majors, whereas almost $2,000 separates the annual earnings of men engineers from men language and literature majors nine years after graduation.

However, this is not to say that a man should major in engineering, business, or science to make money. Although some jobs require much technical preparation, the labor market also determines earnings and the choice of a career. For instance, many men in all college fields of study eventually enter business, a sufficient migration to make negligible the difference in earnings between those who work at jobs related to their college specializations and those who do not, for both men and women. Much of the knowledge, skill, and ability that make for success in business evidently is learned on the job.

Initial earnings, incidentally, are no index of ultimate earnings. Gains within the years encompassed by this survey are spectacular as well as paltry for occupations with widely varying initial salaries. For example, in six years one $3,300 job grew to $3,600, while another with the same initial salary grew to $4,800; one $4,000 job increased by $500, another by $1,000.

A college education clearly pays financially, but even more for women than for men. College men earn 60 per cent more than the general male population earns, college women twice as much as does the general female population in the same age range.

SALARIES and the correspondence between the graduate's field of study and field of work do not tell the whole story. Consideration of a complex of factors determining the caliber or responsibility of a job reveals that, for the older men graduates, the most responsible jobs are held by engineering, science, and social-studies majors. For women, a college background in education, business, or science produces the most responsible jobs. Men and women with positions directly related to their college specializations rank higher on the scale of job responsibility than do graduates in unrelated jobs, with the range of variation higher for women.

An overwhelming majority of the graduates report that they enjoy their work; women more than men, older graduates more than the younger ones, those working at jobs related to their college specializations more than those who are not. Men's attitudes toward their jobs are almost perfectly correlated with earnings. The more

a man graduate earns, the more he likes his job. But only unmarried women in the earlier graduation class are thus influenced by salary, and, even then, not so strongly as are the men.

The attainment of job goals, an aspect of job satisfaction, was explored separately. Here again, the numbers of graduates who think they have achieved their occupational goal are about the same as the numbers working in posts related to their college specializations. Three out of five men graduates believe they have reached their goals. They are most often engineering, business, and science majors. However, women science majors are not getting the jobs they anticipated having, often finding their work limited to routine duties. Among the women, only the business majors and a small number of the fine-arts specialists actually have the jobs they had hoped for.

Sixty per cent of the older graduates consider that they are working at the peak of their abilities, as do almost as many of the younger graduates. Naturally, the less responsible the current job, the higher the graduates rates his capabilities as compared with his duties.

What do graduates expect to be doing and earning at the age of fifty, twenty or twenty-five years from the survey year of 1950? If present expectations materialize, business will be the leading occupation for the men, teaching for the women, when they are fifty years old. Among the professions, teaching takes precedence for both sexes as they anticipate their future.

In 1950, of every twenty men, ten were in business, seven were in professional occupations, two were teachers, and one was in some miscellaneous occupation. In 1970 or 1975, the distribution will not have changed much if the graduates' expectations come true. There will be a loss of two graduates in the business world and a gain of two in teaching—not necessarily a direct shift, for many businessmen show an interest in becoming lawyers, while many persons in other professions hope to teach.

By middle age the median salary expectation of the men is almost $10,000 a year, with three-eighths of the 1941 graduates expecting to earn more than $15,000 a year, as do only the doctors and dentists in the 1947 graduating class.

At middle age only one woman in five expects to be employed outside the home. These workers include half the women in the 1941 class and 30 per cent of the women in the class of 1947 who were gainfully employed in 1950. Almost half the women who expect to work will be teaching. Teaching, social work, and secretarial jobs are the only occupations expected to enlist as many as a dozen women twenty years from now.

OVER half the men graduates and more than two-fifths of the women graduates had either completed or were doing graduate work in 1950. These include almost all the teachers, four-fifths of those working in the field of science, more than three-fifths of the other professional workers, and almost two-fifths of persons in business.

Nine out of ten men and seven out of ten women who start a program of graduate work do so expressly for vocational purposes. They desire job advancement or new and better jobs. Medicine, dentistry, and law, of

course, require graduate training. But to judge from the experience of these graduates, so do the occupational fields of teaching, science, statistics, psychology, and social work.

More than one-quarter of all advanced study is in business, and from 11 to 15 per cent in each of the graduate fields of education, engineering, science, law, and social studies. Men who do not do graduate work in the same area as their undergraduate work, turn to business; women, to education.

Of graduates doing advanced work, three-quarters of the women seek the Master's degree, but one-third of the men go even further, toward Ph.D.'s and professional degrees.

More than one-fifth of the graduates were prevented from doing graduate work, most frequently by circumstances beyond their control. Fully half of those persons doing graduate work could not have done so without the aid of the G.I. Bill. The four municipal colleges are primarily undergraduate schools; to the extent that the facts just cited reflect financial inability to underwrite the expenses of a graduate program as well as the expenses of their own or family support, these graduate students are a measure of how much service would be afforded to the community by expanded graduate facilities at the municipal colleges.

GRADUATES have derived from their undergraduate years a wide variety of values. Their comments range from praise of the most esoteric to the most plebeian benefits of college. Liberal, humanistic values slightly outweigh vocational returns. Personal development and the sharpening of critical faculties are also mentioned by many graduates. Ten per cent of the women believe their education has made them better wives and mothers.

In what ways could the graduates have received even more from their college education? How can college curriculums be improved? Here, better balance between vocational and general education is sought. With the exception of a few who favor either complete vocational training or a straightforward liberal-arts education, liberal-arts and social-studies majors want more realism in college work, a more practical approach in their education. Business, engineering, and science majors want more "cultural" subjects. Everyone would like to be "well rounded."

Teachers suggest more practice, less theory. They favor more psychology in the curriculum, too. Women in all fields cite a need for the office skills of shorthand and typewriting. In the light of the large numbers of women in office occupations and of those who might have used office skills as an entree into professional positions, college faculties might well consider the wisdom of making some provision for the teaching of such skills in the college program.

Throughout the responses there is an insistent plea for more guidance. Many complain of floundering, of mistaken identification of talents and aptitudes, of erroneous notions or no notions at all of job opportunities in many fields.

Evident in the vigorous commentary of many respondents is their genuine concern for the quality of higher education in this city and in this nation. May the public and our legislatures share this concern!

Basic Natural Science in Liberal Education

By EDWARD C. FULLER

A Course at Champlain College of the State University of New York

WE WHO teach biology, chemistry, geology, and physics at Champlain College have three principal tasks to accomplish: first, educating all of our students toward an understanding of the nature, powers, and limitations of science; second, preparing some of our students to be scientists; and third, laying the foundations for the professional training of other students who plan careers in medicine or engineering. Because we believe that both scientist and non-scientist need to recognize the fundamental unity of the sciences, we require all Freshmen enrolled in liberal arts to take our course in Basic Natural Science.

The objectives of this course are fourfold. We want each student to read, observe, and think critically, and to report his observations and thoughts clearly; to cultivate the scientific habit of thought, recognizing the conditions necessary for valid experimentation and the need for objectivity in interpreting phenomena; to understand the nature of science, how it grows as an organized body of knowledge, and how scientists work; and to learn some of the major scientific concepts which underlie our interpretation of many different phenomena in nature.

Students do not learn critical thinking by listening to lectures about it. To learn to think critically—and to give evidence of this ability—they must read printed materials, observe natural phenomena at first hand or in pictures, digest the impressions they gain, and communicate their thoughts clearly by the written or spoken word. To stimulate critical consideration of ideas and to provide practice in oral expression, we limit our classes to about twenty students. Three one-hour periods each week are used for discussion and one three-hour laboratory period for experimentation. The function of the teacher in the classroom is not to answer questions but to ask them in a fashion which will enable the students to answer on the basis of their own reading and thinking. The teacher is a moderator of discussion, not a lecturer.

The experiments performed in the laboratory are designed to raise questions in the student's mind—questions which he can answer by analyzing his results, together with those obtained by other experimenters, either his fellow students in the laboratory or experts who have published their results. The function of all laboratory work is to provide

experience in critical observation and thinking. To aid the student in learning the art of self-education, a "Discussion Guide and Laboratory Manual" is used. The Guide consists primarily of leading questions which can be answered on the basis of students' personal experience with the phenomena of nature or by reading textbooks of science. The directions for laboratory work are designed to help the student discover—rather than verify—relationships in nature.

IN ONE college course of two semesters it is obviously impossible to study more than some small portions of the vast body of knowledge classified as natural science. Systematic coverage or extensive survey is not our concern in selecting the content of Basic Natural Science. We prefer, rather, an intensive study of a few fundamental ideas about man and nature. Materials from the biological and physical sciences are selected for their value in developing twenty basic concepts which serve as the framework for the subject-matter of the course.[1] Though many facets of the sciences are not illuminated by the concepts included in our list, we believe these twenty are basic to understanding a considerable portion of natural science:

1. All substances are composed ultimately of tiny particles (atoms, molecules, or ions) in rapid motion.

2. The heat content of a substance is proportional to the energy of motion of these ultimate particles; heat changes solids to liquids and liquids to gases by increasing the energy of motion of the ultimate particles.

3. All matter is made up of different combinations of the atoms of some ninety-odd elements.

4. Atoms of all elements are composed of protons and neutrons packed in a tiny nucleus surrounded by a cloud of electrons; atoms are mostly empty space.

5. The atoms of different elements differ in the number of protons and neutrons contained in the atomic nucleus and in the number and arrangement of electrons in the cloud.

6. Atoms of elements with similar chemical and physical properties have similar arrangements of electrons in the cloud.

7. The masses of atoms are known, so that the relative masses of the substances taking part in a given chemical reaction are known.

8. Energy is always either produced or consumed when a chemical reaction takes place; the amount of energy involved is always the same for the same masses of substances reacting in a given way.

9. Energy is the capacity for doing work; work is measured in terms of a force acting through a distance.

10. In all but "atomic energy" reactions the total mass of materials entering into a reaction exactly equals the total mass of the products formed.

11. In all but "atomic energy" reactions there is no loss of energy when one form of it is transformed into another.

12. Matter is an extremely concentrated form of energy, and conversions of one into the other can be made by "atomic energy" reactions; in these conversions, the total of

[1]Morris Meister suggested many of them in a paper before the symposium on "Science in General Education" sponsored by the American Association for the Advancement of Science, December 29, 1949.

mass-and-energy before the reaction is equal to the total of *mass-and-energy* after the reaction.

13. All living things are composed of one or more cells which contain a substance called protoplasm.

14. Foods ingested by living organisms are utilized through chemical and physical processes in the organism both to build tissues and to produce the energy necessary to maintain life.

15. Several different classes of food, serving different purposes, are required for the adequate nutrition of man.

16. Living things can arise only from other living things of the same kind; all life tends to reproduce its own kind.

17. The creatures of today have descended by gradual changes from different and usually simpler creatures of the past.

18. The rocks in the crust of the earth contain a record of how the earth and life on it have changed in the past.

19. Past changes in the earth's surface and the living forms inhabiting it are adequately explained by processes now in operation.

20. The conception of the world one builds from his sensory perceptions does not correlate completely with the physical world which produces the stimuli perceived by his senses.

THE average college Freshman has the ability to memorize without great difficulty the amount of factual material needed for an understanding of these twenty concepts. Because the student is freed from extensive memorizing, we ask him to devote considerable effort to learning how the facts he deals with are discovered in the laboratory and in the field, how they are fitted into patterns which serve as the bases for hypotheses, how hypotheses are tested by the search for new facts, and how natural phenomena are correlated and described by "laws of nature."

For example, we do not ask the student to memorize Newton's second law of motion but we do set for him the task of discovering the law in the laboratory. An apparatus is set up to measure the accelerations produced when different forces act on the same mass and when the same force acts on different masses. Each student determines the acceleration produced with one of the several combinations of force and mass. Accelerations found by different students for different combinations are tabulated and studied as a whole. By plotting the data on graph paper, the group of students readily discovers Newton's second law, expressed as:

$$\text{Force} = \text{Mass} \times \text{Acceleration}$$

Again, we do not ask the student to memorize Boyle's and Charles's laws concerning the behavior of gases. We do lead him to discover these laws—and even to estimate the value of absolute zero on the centigrade temperature scale from his own data on changes in the volume of a sample of gas at temperatures between the boiling and freezing points of water.

As a further example, in the study of Mendelian inheritance we do not postulate the ratios of phenotypes to be expected in the offspring from crossing parents of known genotypes and ask the student to verify these ratios. Instead, we present him with the offspring of certain crosses and

ask him to determine the genotypes of the parents from his observations of the phenotypes of the offspring. Whenever possible, the emphasis in laboratory work is placed on discovery of relationships new to the student rather than on verification of relationships discovered by others.

In laboratory work involving quantitative relationships, we ask our students to consider carefully how errors of manipulation or of measurement will affect their results. Emphasis is placed on understanding how precise "accepted values" become a part of scientific knowledge rather than on the accurate redetermination of these values.

STUDENTS interpret the objectives of a course most readily by what they find on examinations. In constructing these, we place major emphasis on testing critical thinking, or—in more specific terms—the ability to face an array of facts and to draw logical conclusions from them. About one-third of the score on each of the four two-hour examinations given each semester depends upon the logical interpretation of data obtained from experiments described in complete detail in the examination. These are not experiments which the students have performed, but are simple enough to be comprehended by them on the basis of their own experience in the laboratory. The description of each experiment, including the data obtained, is followed by a list of stated conclusions. By critical analysis of the data presented in tables or graphs, the student checks these statements. He marks each as true or false or indicates that the experiment does not provide enough data to judge the validity of the conclusion.

Another third of the score on the examinations depends upon the correlation of facts and principles. Here the student is expected to draw on his memory for the concepts needed to solve problems, but many of the facts to be used in the applications of the concepts are furnished. For instance, when dealing with the motions of bodies and with work and energy, the examination includes a page of a dozen mathematical equations relating the variables in different ways, defining the symbols used in the equations, and giving the numerical values for several constants of nature. This page contains much more information than is needed for solving the problems in the examination, and the student must select the material pertinent to each problem on the basis of his understanding of the concepts of velocity, acceleration, force, work, and energy. As another example, when examining the student on such subjects as the structures and functions of living organisms and the reproduction of cells by mitosis and meiosis, we ask him to write several short essays. For each topic, we supply a list of a dozen or so key words which are to be used in the essay.

The other third of the score on the examinations depends primarily upon the memorization of facts and principles which have been studied. In order to pass the course a student must achieve about one-half of the total possible score for the group of four examinations. He cannot, therefore, receive a passing mark by relying exclusively on memorization of facts, concepts, and principles.

Because Basic Natural Science is taught in many sections by several different instructors, each semester we give four two-hour examinations to all sections simultaneously. In order to impress upon students the need to study day by day for the discussion periods rather than to rely upon bursts of cramming for examinations, we give eight or ten unannounced short quizzes in class each semester. To emphasize the importance of careful work in the laboratory each week, we mark the students' reports in their laboratory notebooks. About seventy per cent of a student's mark for the course is determined by his scores on the four two-hour examinations, about fifteen per cent by his scores on class quizzes, and the remaining fifteen per cent by the rating on his laboratory notebook.

At the beginning and at the end of our two-semester course we should like to give an examination which would enable us to measure the growth of our students in all the directions indicated by the objectives stated in the second paragraph of this paper. For measuring progress toward the first three of our objectives we have been able to discover no examination which is widely used and for which norms based on thousands of students' scores are available. For measuring the growth of our students in the direction set by our fourth objective—understanding the basic concepts of science—we use the section on science in the Cooperative General Culture Test, Form XX.

We administered this test to all our students who enrolled for the first semester of Basic Natural Science and to a large number of those who completed the second semester of the course. The percentile rank of each student taking the test at the beginning of the course was determined from norms established by the scores of 2,000 Freshmen at other colleges. The percentile rank of each student taking the test at the end of our course was determined from norms established by the scores of 12,000 Sophomores at other colleges. The average gain in percentile rank for the 82 students who took the test both times was 15. The mean for the group was raised during the year from the 48th percentile at the beginning of the fall semester (when compared with freshman norms) to the 63rd percentile at the end of the spring semester (when compared with sophomore norms).

Though we do not have similar evidence to show that our students have made good progress in the directions set by our first three objectives, we believe such evidence can be obtained. We are now devising tests by which we hope to obtain it. If we can demonstrate that our students have developed their capacity for thinking critically and their comprehension of the nature of science as much as they have grown in understanding of scientific concepts, we shall be well satisfied.

Certain Characteristics of General Education

BY JUDSON R. BUTLER

A Statement of Principles

ANYONE who has ever tried to promote faculty agreement on a proposed general-education program knows how difficult such a task can be. Either these discussions end with the faculty divided into factions according to philosophical and psychological assumptions about the aims of education and the nature of the learning process, or else an illusory consensus is achieved by avoiding the real issues and concealing the core of the problem behind a screen of generalizations. It is apparent that the present state of our understanding about the common educational needs of our students and our knowledge of effective ways of meeting them is largely incomplete, and what is known is far from conclusive.

The vast gap which has opened up in the last few decades between educational theory—derived from democratic ideals, the psychology of learning, and social psychology—and educational practice in our colleges is a measure of the gap in general education. Although general education has been extensively studied, described, analyzed, and publicized, its real nature is often regarded as enigmatic, or more often is misinterpreted. It is not specialized or vocational, and it is more than merely "cultural" or "liberal" training; most importantly, it is not a survey of the conventional fields of learning. It is apparent that general education cannot be defined by what it is not. Yet if one does not know, how can general education be instituted, improved, or borrowed?

This difficulty has been aggravated by the fact that no one can identify general education by pointing to a list of courses or subjects; there are almost as many curriculums as there are separate programs. Furthermore, the convenient option of constructing a program by a mere reshuffling of the traditional content or by shaping a core curriculum out of existing liberal-arts courses is ruled out by most serious workers in this field. It is held that there is no easy way to do this job and no way of avoiding the necessity for rebuilding the basic pattern of instruction.

While these considerations throw some light on what a general-education program ought not to be, we would get further light if we could agree on some more positive categories. In this attempt, the chief danger is the failure to discern what details are fortuitous or irrelevant, and what principles help to endow

learning with a novel relevancy to the aims of education and to the life of the student. Probably no one will accept all of the points here selected for mention. Furthermore, it would be surprising if any existing program could be said to embody all of them.

TO AVOID possible misunderstanding, it should be emphasized that any effective general-education program must insist on exact knowledge, hard work, and high standards of achievement. A constant respect for facts, an enthusiastic interest in ascertaining them, the trained habit of relating facts to ideas and principles, and their intelligent application to complex problems of everyday living—these are the goals of the very best and most dedicated teachers, these will demand nothing but the very best efforts from students. In this regard, general education is not different from the traditional program, except that more, rather than less, effort may be required of all concerned.

First, the general-education curriculum is determined co-operatively by the whole faculty concerned. In reforming the program of instruction, faculty members—each with his own discipline or area in mind—should realize that every topic must be arranged with due regard for the over-all plan. There are many questions to be asked, and at least tentatively answered, and many studies and trials to be made, before one can justify the inclusion of subjects or decide how they should be taught or by whom. Each segment of general education must be oriented toward goals which, instead of being independent and unrelated, can be realized only through the whole system of goals of which each is an integral and indispensable part.

Second, general education is self-contained rather than preparatory to advanced work. Formal study of any particular subject area ends with the general-education program—except in each instance for a very small minority. The course of instruction thus is justified by what has been done for the student at its conclusion.

One particular criticism often leveled at the traditional "introductory course" will illustrate this point: that the typical course is designed and conducted to introduce the subject to the five or ten per cent of the students who may become biologists, for example, rather than for the benefit of the greater number to whom this course in biology must serve both as an introduction and conclusion. For those who elect a given major field, the "introductory course" is the first step in a professional or specialized career, not primarily general education; for the non-major, it may well mean the learning of a comparatively meaningless and relatively transient set of elaborate preliminaries for which he is unlikely ever to find any use.

General education is not made up of incomplete fragments which may or may not be pieced out at some later date, nor does it encourage the student to become a "snapper up of unconsidered trifles." The entire program of study is carefully planned so that knowledge of special facts, the general ideas, the special and general aptitudes, together may form a pattern of understanding and competence essential to educated people living and working together in this present-

day world. Facts are linked to immediate perceptions and take on meaning as they illuminate some clear-cut theory exactly comprehended, and these apperceptions in turn become useful as they are related to some thoughtful purpose.

With certain notable exceptions, it is not initially apparent which students should or will go on to become scientists, social scientists, or teachers of French. Basic interests and special aptitudes emerge gradually. Study has shown that when commitment is delayed to allow for a thorough guidance program, over half of the entering Freshmen will change their educational and vocational objectives during the first two years of college.[1] Furthermore, the wisdom of immediately plunging science Freshmen or any other new students into a specialized field of narrowly "related" subjects is at least open to question. Non-science as well as science majors should acquire the ability to make firsthand observations and to relate immediate perceptions to general knowledge; they should strive for facility at analysis, at classification by similarities, at seeking causes, and developing habits of mind which will aid them to apply the knowledge and methods of science and thus to deal more effectively with many problems of life.

Knowledge as such plays an essential but supporting or secondary rôle. Every topic and subject in the program must pull its own weight in advancing the closely related goals of general education. If that kind of education should serve as a sound and reliable foundation upon which to build later specialized study—and there is every evidence that it does—this may be regarded as an extra dividend.

Third, general education relies upon knowledge which is relevant, and applicable to problems outside the classroom. In general education, the emphasis throughout is interpretative rather than accumulative, and there is an activity of application in every phase of instruction. In this context, unapplied knowledge is incomplete, transitory, and deficient in meaning. Subject-matter should be symbolic of the larger objective, and facts are bound at every point to that purpose.

Fourth, general education has a larger, rather than a smaller, frame of reference within which elements of the program are oriented. It more closely resembles a continuum of intimately related facts, principles, ideas, methods, and applications, than a discrete or atomistic arrangement of subjects and courses.

Traditionalists have emphasized one particular criticism of general education: that it cultivates breadth at the expense of depth or thoroughness. Obviously one cannot achieve narrowly conceived depth except at the expense of breadth. Accordingly, it is assumed that breadth cannot be achieved except at the expense of depth. The criticism deserves serious attention. This is not only a common conception, but many general-education programs did start out by employing the end-to-end method of instruction which is characteristic of the superficial survey approach.

The fact is sometimes overlooked, however, that the truer nature of "breadth" and "depth" and of the

[1]Unpublished study of some three thousand students at Boston University College of General Education. Further details regarding the study may be obtained by consulting the writer.

integrative method is not to be understood on the analogy of spreading a limited amount of butter on one or several slices of bread, or of surface mining as opposed to digging deep for gold. In its popular sense of vertical versus horizontal, the concept of "depth" of scholarship is misleading. As used in general education, "breadth" is not synonymous either with thin, shallow, or superficial, any more than "depth" necessarily indicates narrow or strictly specialized scholarship. The idea of "depth" is most often associated with the process of mastering certain elaborate preliminaries and then going on to study the narrowly related material usually classified under the rubrics of such a subject as physics, chemistry, biology, or psychology. Knowledge and understanding, however, do not necessarily operate in an abstract world corresponding to this conception of physical dimensions. Is biochemistry or astrophysics therefore superficial? Thoroughness and scholarship in one instance necessitate the breaching of several barriers; while in another, the student is confined within one discipline. This will depend upon the purpose of the study and the nature of the problem. Whereas specialized study may advance on a steadily narrowing front of concentration, general education broadens as it progresses to take in significantly related material from an ever widening area of learning. General education incorporates facts, principles, and methods as it goes along, with a very different purpose in mind. The elaboration of such an obvious principle would be unwarranted were it not for the fact that the integrative method and general education are so commonly misinterpreted on this score.

The inclusive goals of general education are such that an all-out effort to construct a program of study with these broad views in mind, and without correlating the knowledge and methods commonly associated with a number of conventional disciplines, would be hard to conceive. It is not possible here to do more than to suggest the relation of "comprehensive integration" to the closely linked pattern of objectives with which general education is concerned.

Nevertheless, it must be apparent that the whole advance of general education toward its appropriate goals will lead to a broadening rather than a contraction of the field of interest. Relevancy to life is created out of new associations, and from an exploration of the unity of knowledge rather than from an emphasis upon the uniqueness or diversity of disciplines.

Fifth, general education is presented to the student as an ordered progression, building upon, expanding, and applying at each step that which has gone before. Every effort is made to bridge gaps in knowledge and understanding, to tie in essential skills, and to eliminate needless repetition.

This is a logical corollary to that "larger frame of reference" mentioned before, and to the proposal for an active and wider integration of content and method. An ordered sequence of instruction is nothing new in certain specialized areas in higher education, though notably absent in those traditional phases of a student's training directed to general understanding and competence. The aim is not to describe and explain certain

unrelated phenomena, selected in each instance at the discretion or individual whim of the instructor, but to help the student by every feasible means to progress toward a carefully balanced selection of goals. Anything short of a co-ordinate faculty effort and a controlled and carefully correlated pattern of instruction, however expedient the compromise, is in the nature of giving hostages to fortune. Here, more than in any phase of education, the lack of careful, over-all planning and organization is a practical disadvantage. A common result is that the teacher in every new course finds it necessary to repeat at least a certain bare minimum of fundamental material, and to start each time at an elementary level.

This is the heart of the program: an organized, integrated progression of knowledge, understanding, and appreciation, oriented throughout to the broader goals of education. It may be objected that this will put a student in an educational strait jacket. But whether or not any program is a strait jacket depends far more on the manner in which the student is taught than upon the choice or arrangement of subjects.

We live in a day which is just recovering from excessive specialization. There is no point in minimizing the problem involved. On one side is the powerful and ubiquitous force of specialized interest; on the other is general education, competing for time and asking for a great deal of concentrated effort from both faculty and students. True, specialized and general education are now accepted as the twin pillars of college training. Each, in theory, complements the other. Yet the whole academic enterprise, from its artistic, creative, or research activities to its educational assembly lines, has been adjusted primarily to standard specialties.

It has been apparent that the concept of general education as a random selection of departmental subjects, functioning without change in the older design of courses or in the structure of administration, is difficult to reconcile with most of the characteristics here suggested. What general education has to impart is a sense of the unity of knowledge, with particular reference to the life of the student and the life of our times. A haphazard arrangement of courses, no less than a narrow emphasis in learning, is out of keeping. It would appear that a certain amount of retooling and a definite reorganization of the educational pattern is in order. Somehow knowledge must be imparted imaginatively, without destroying the intimate relationship which naturally exists between all fields of learning, and without neglecting the relevancy of general ideas to the particulars of life. For this, an ordered and related progression of knowledge, intellectual powers, and critical understanding and appreciation should be facilitated by a curriculum designed with this purpose in mind.

Sixth, general education is concerned with a continuous and systematic investigation of the worth of the program. The ultimate criterion, alike in scientific theory, in government, in industry, and in education, is the fact that it works, that it serves the purposes for which it was designed. It would appear that general education is one of the few branches of serious human endeavor

where there is any considerable body of responsible opinion opposed to the very idea of checking the results.

While it is difficult to match attainment against such purposes as critical thinking, aesthetic appreciation, and sensitivity to social or moral values, there is no guarantee that any recent version of general education will not reproduce the same old faults or introduce new and equally limiting factors. An educational philosophy without recourse to any systematic effort at matching the purpose against results runs the risk of canalizing instruction along dogmatically predetermined lines of study and thought, or along lines suggested by psychological principles which, at best, may suggest method and content, but cannot supply final answers. Every educational theory which has ever stirred scholars into lasting academic reform has been able to deliver novel and observable benefits. Being new, general education rightly is on the defensive, and the need for evaluation is all the more critical.

There is little immediate prospect of accurate general formulas with which to validate our programs. But there is reason for belief that the long-run prospect is hopeful, and certain rough measures are now available. For several years concerted individual and co-operative efforts have been under way seeking to discover techniques which, over and above testing and measuring for sheer knowledge, would throw light on this problem. Definite progress has been made and is being made in one of the most difficult areas of evaluation; that is, in "the art of the utilization of knowledge."

Seventh, general education is student-centered rather than subject-centered. The first concern is the student: his abilities, attitudes, appreciation, adjustment, and behavior; the ultimate concern is his impact upon the community. This key value imposes on the faculty unusual responsibility, and apart from it the faculty sooner or later sinks back into a passive reliance upon subject-matter as the means and the end of general education.

This characteristic of general education is intimately related to all those mentioned before. It makes a great deal of difference in designing a course or program whether the faculty starts with facts, principles, and ideas which are judged to be important and attempts to make them significant to the student, or whether the starting point is the student, and content and methods of instruction are chosen to meet his needs. It is not always easy to make this distinction. Nevertheless, the tendency has been to exaggerate the power and the efficacy of knowledge as such, and it has been assumed as a matter of course that every subject should be studied for its own sake, with implicit reliance upon its automatic transfer value and general utility. One large practical effect of making the student the starting point and the center of interest and attention is the attainment of wider co-operation and mutual faculty support through a structured reliance of scholar upon scholar for the attainment of common goals. Here, then, is the ubiquitous force which permeates the entire program, which promotes unity, and which may give direction to every phase of teaching and learning.

The move from an emphasis upon

coldly objective scholarship to responsible human adjustment, and from isolated or narrowly related particulars to the creation of larger instructional patterns of personal and social significance, is a hazardous one. The change-over is not easy for anyone concerned. It is particularly difficult in an academic environment where departmental autonomy is buttressed by the usual prerogatives and perquisites, and when the race for preferment is run within the separate lanes of specialized scholarship. There may be the claims of conformity and academic respectability; or the specter of being tarred with the same brush as the teacher of educational theory and practice.

There are other obstacles, however, which deserve serious attention. Chief among these are not only a traditional narrowness in the selection and arrangement of content but also an overconcern for the traditional or assumed logical development of subject-matter and timidity in abandoning a sequence which long since has become habitual or standard.

The insistence in general education on traditional patterns of knowledge or upon disinterested intellectual attainment is a psychological and pedagogical error, if not a matter of philosophical confusion. Santayana has aptly defined fanaticism as the redoubling of your efforts after you have lost sight of your aim. After all, the ultimate concern of general education is the development of the student's entire personality—intellectually, socially, and morally. The systematic development or treatment of subject-matter is primarily a means to that end.

There is another important characteristic of general education which should be mentioned, a characteristic which is related to religion—an ideal of service, of some force of spirit working through the citizen, the artist, the poet, the scientist, the cleric, the teacher, and, not infrequently, the industrialist or businessman. To the extent that any educational program develops this disposition in the student to seek social progress, to subordinate his selfish interests to the welfare of others, it is to that extent related to general education. This characteristic of disinterestedness is in no way exclusive with general education. Nevertheless, it is an important element in any genuine general-education program.

IT IS not to be presumed from this account that one can lay down arbitrary criteria to which all programs must conform in order to be accredited by the label of general education. The futility of an attempt to find a stable list of characteristics which will distinguish once and for all the effective or valid program from the ineffective or the invalid is self-evident.

The instructor's personal contribution to the student's general education in any program is a factor of tremendous importance. Gifted scholars and teachers may render the facts, principles, and methods of any subject exciting to the imagination, so that they illuminate the student's process of thought and endow learning with an enduring significance. Nevertheless, when the general conditions of the program are favorable to the aims of general education one may suppose that, with a particular

[*Continued on page 452*]

· With the · Technicians ·

Predicting College Achievement[1]

The Association of Minnesota Colleges has been conducting an annual testing program for high-school Seniors in Minnesota ever since 1928 for the purpose of providing high-school advisers with "basic data for selecting and encouraging capable students to enroll in college." Since this program is carried out in January and February of the senior year, many of these advisers have found themselves without sufficient time to encourage the able but undecided student and his parents to make a decision about college before the end of the school year.

The question arises whether it might not be possible to begin handling this problem earlier in the school program. If this could be done, the adviser would have more time to consult with both student and parents. Another advantage would be that the adviser and student could plan a high-school program more in accordance with the student's goal. The question of suitable college could also be approached earlier, with an appropriate attempt at upgrading or downgrading aspirations.

Previous studies have indicated that tests given before the senior year of high school are valid for predicting college achievement. Byrns and Henmon, reporting on this problem in 1935, asserted that they could predict first-semester college marks from a combination of the tenth-grade average and an intelligence-quotient measure obtained as early as the fourth grade.[2]

The purpose of the present paper is to determine whether college achievement can be predicted from scores made by ninth-graders on the American Council on Education Psychological Examination for College Freshmen (hereafter, A.C.E.).

In 1946, the 1937 form of the A.C.E. was administered to a group of high-school Freshmen as part of the regular state-wide testing program in Minnesota. In 1949, the same group was given the 1947 form of the A.C.E. Form 22 of the Ohio State University Psychological Examination (hereafter, O.S.P.E.) was administered during the orientation-registration program to the students who entered the College of Science, Literature, and the Arts of the University of Minnesota in the fall of 1949. A random sample of these students was taken. Of the 186 individuals in the sample (108 men and 78 women), 18 completed one quarter, 11 completed two quarters, and 157 completed the full year.[3]

The zero-order correlations of the two A.C.E.'s, the O.S.P.E., and the

[1]Reported by Herbert W. Samenfeld, Assistant Professor of Education and Psychology, New Haven State Teachers College.

[2]Byrns, Ruth, and Henmon, V. A. C. "Long-Range Prediction of College Achievement," *School and Society*, XLI (June 29, 1935), pp. 877–80.

[3]This paper is based on a report submitted in partial fulfillment of the requirements for the M.A. degree, University of Minnesota, 1951. The author is indebted to Ralph F. Berdie and Wilbur L. Layton for direction and assistance.

high-school percentile rank (H.S.P.R.) were significant at the 1–per cent level by the normal-curve criterion. The twelfth-grade A.C.E. showed less correlation with the H.S.P.R. (.21) than with the O.S.P.E. (.59), which might be due to the selection of the sample for admission to college on the basis of the A.C.E. and H.S.P.R. The selectness of the sample is indicated by the mean H.S.P.R. of .77.

The table which follows presents the correlations of the variables, singly and in multiples, with the first-year honor-point ratio (H.P.R.):

Variable	r
A.C.E. (12th grade)	.34
A.C.E. (9th grade)	.39
O.S.P.E.	.52
O.S.P.E. and A.C.E. (12th)	.53
H.S.P.R.	.58
A.C.E. (12th) and H.S.P.R.	.62
A.C.E. (12th), A.C.E. (9th), and H.S.P.R.	.63
O.S.P.E. and H.S.P.R.	.68
A.C.E. (12th), O.S.P.E., and H.S.P.R.	.68

All are significant at the 1-per cent level (by normal-curve criterion for zero-order correlations and by "F" test for multiples). The H.S.P.R. is the best single predictor of college marks, which is the usual result. The ninth-grade A.C.E. correlates better than the twelfth-grade A.C.E. with the first-year honor-point ratio, but the difference between them is not significant at the 10–per cent level by the "F" test for correlations based on the same sample.[4] Therefore, the A.C.E. can be used in the ninth grade for predicting college achievement with as much confidence as it is now used in the senior year of high school. This is in line with the earlier findings of Byrns and Henmon. The O.S.P.E. was found to be more highly correlated with first-year honor-point ratio than was the A.C.E. given in the twelfth grade (difference significant at the 1–per cent level) and gave a higher multiple correlation when combined with the H.S.P.R. and with the first-year honor-point ratio. The lower relationship obtained between the first-year honor-point ratio and the high-school percentile rank combined with the A.C.E. in twelfth grade may be due to the restriction of range imposed by the selectness of the sample with respect to the A.C.E. and H.S.P.R., the difference between them being only 0.06.

From these findings three conclusions are drawn. First, the best zero-order predictor of college marks was found to be the high-school percentile rank. Second, the Ohio State Psychological Examination seems to be a slightly better predictor than the A.C.E., but this could be due to sample homogeneity with respect to the A.C.E. Third, the A.C.E. is equally good for predicting college achievement whether it is given in ninth grade or in twelfth grade, and should be of great value to high-school counselors in their work with their students.

[4]Johnson, Palmer O. *Statistical Methods in Research.* New York: Prentice-Hall, Inc., 1949.

Biological Research in Liberal-Arts Colleges[1]

Most of the academic research in America originates in the strong graduate and professional schools of our universities. With no such resources available in the liberal-arts colleges, the small institution must rely upon the interest of individual faculty members in creative scholarship, and their initiative in over-

[1]Reported by John R. Sampey, Professor of Chemistry, Furman University, assisted by Jewell C. Sampey.

coming the handicaps of small libraries and inadequate laboratory facilities.

As an indication of the amount of biological research being carried on in independent liberal-arts colleges, a check was made of the 38,422 summaries published during 1951 in *Biological Abstracts*. Forty-seven liberal-arts colleges[2] contributed a total of 103.3 articles. The names of these colleges and the number of articles coming from each of them are as follows:

Institution	Number of Articles	Institution	Number of Articles
Allegheny	1	Knox	1
Alverno	1	Marshall	1
Amherst	6	Marygrove	1
Antioch	1	Mills	1
Aquinas	1	Mount Holyoke	7
Asbury	1	Nazareth (Kentucky)	2
Barnard	1	Oberlin	3
Bethel (Kansas)	1	Ohio Wesleyan	1
Bucknell	1	Pomona	4
Butler	11	Randolph-Macon	1
Carleton	1.5*	Salem	1
Carson-Newman	.3*	Southwestern (Kansas)	1
Centenary	.5*	Spring Hill	1
Connecticut	3	Texas Christian	1
Converse	1	University of Redlands	1
Denison	1	Vassar	3
DePauw	2	Wabash	1
Florida Southern	16	Wellesley	1
Fresno State	1	Wesleyan (Georgia)	1
Georgia State College for Women	1	Wesleyan	1
Grinnell	1	Willamette	1
Hanover	1	William and Mary	11
Hollins	1		
Immaculate Heart (California)	1		
Kenyon	1		

*Fractions of an article denote joint papers with other institutions.

An analysis of the geographical distribution of the colleges most productive in biological research presents some interesting facts. The liberal-arts colleges from 15 southern states produced 39.8 biological papers as compared with 36.5 papers from colleges in the North extending from New York to Kansas. The New England states ran third in the volume of biological research reported in the 1951 issues of this key to the world's literature in this field.

Further interesting observations can be drawn from a comparison of the chemical and biological research in southern liberal-arts colleges. A survey of *Chemical Abstracts* for the eighteen-month period, July, 1950, to December, 1951, gives the following data:

Institution	Number of Articles	Institution	Number of Articles
Bethany	3	Florida State College for Women	1
Carson-Newman	3	Hood	1
Centenary	1	King	1
College of Charleston	1	Nazareth	1
Furman	9	Sweet Briar	1
Florida Southern	3	Texas Christian	1

This total of 26 papers from 12 institutions[3] may be contrasted with the figures showing that 15 liberal-arts colleges in the same states had 39.8 papers in the 1951 *Biological Abstracts*. Only four institutions appear in both lists; namely, Carson-Newman, Centenary, Florida Southern, and Nazareth. This emphasizes the fact that research in these smaller colleges depends upon the individuals in the departments of biology and chemistry rather than upon the standing or general reputation of the institutions in academic circles.

Hawkeye or Uncas?[1]

Far west of the scenes of James Fenimore Cooper's famous "Leatherstocking Tales," there is a university

[2]The sixth edition (1950) of the *College Blue Book* has been taken as the authority to determine which institutions granted Ph.D. degrees, and which had professional schools of agriculture, dentistry, engineering, medicine, pharmacy, and so on.

[3]*Furman University Magazine*, Vol. I, No. 2 (1952), pp. 8–9.

[1]Reported by George Mair, formerly Student Activities Adviser, Student Personnel Services, University of California at Los Angeles, now with the United States Army.

campus whose position in the matter of university-student government relationships is either that of Cooper's pathfinder, Hawkeye, or of his last of the Mohicans, Uncas. This university campus began its life in 1882 as the California State Normal School at San Jose and, in the course of many geographic and administration changes, has finally emerged as the Los Angeles campus of the University of California.

From its earliest days U.C.L.A. has had a tradition of vigorous student self-government. The first student organizations were designed primarily to provide outlet for musical, literary, or oratorical talents. Additional student societies soon arose to provide for other extra-curricular interests. These first organizations have, in somewhat changed form, survived to the present day.

The present relationship which exists between the University and the student government is one under which the latter enjoys a degree of autonomy that is unusual on the American college campus today. The University administration has a "hands-off" philosophy toward student government: it does not interfere with its functions and operations except when absolutely necessary to do so in the interest of the University's welfare or in the discharge of its responsibilities to the California taxpayer.

This attitude on the part of the University administration allows the student government virtually complete control over the operation of the student union and its various enterprises such as publications, student stores, food-services, and so on. Furthermore, it gives the student government control over the administration and conduct of the intercollegiate athletic program modified only by the University's faculty representative to the Pacific Coast Conference.

The question that now comes naturally to mind concerns the relative worth of this type of relationship between university administration and student government Does it offer anything meritorious which might make it worthy of adoption by other university administration groups? Let us consider its advantages from the points of view of the three most vitally concerned with the end result; namely, the students, the university, and the community at large.

For the individual student, the chief benefit of the degree of independence enjoyed by U.C.L.A.'s student government is the opportunity it gives for development of initiative and the ability to make social and occupational adjustments in post-college life. Student government provides a workshop in which the student may try out his ideas and aptitudes before getting involved in the "outside world," where errors in judgment are often costly to the individual. The development of an ability to get along with other people is extremely important to success and happiness, but, unfortunately, many students leave our colleges and universities every year without having prepared themselves to deal with their fellow men.

For the University, this relationship means the alleviation of many burdens which it would otherwise have to shoulder, and, most important, the satisfaction of sending out men and women who are prepared to

accept the community leadership which society expects of the university graduate. The functions of providing facilities such as a bookstore, cafeterias, student publications, and so on, with all their attendant problems, are taken out of the hands of the university when there is a student government which is allowed to assume these responsibilities itself. Furthermore, no university administrator who is familiar with the numerous problems associated with the financing and administration of an intercollegiate athletic program would not be more than happy to transfer the responsibilities involved to some other agency within the university organization. Several decades of experience have proved that a self-ruling student government such as exists at U.C.L.A. is capable of administering an adequate and satisfactory athletic program.

One of the most important values to be derived by the university from a relatively sovereign student government results from the freedom of expression which the students enjoy. This has made improvement in teaching possible by permitting students to give suggestions and criticisms of teaching many of which have proved of great value. The good accruing to the community is, of course, corollary to the benefits which the individual and the university receive, and consists of the gains inherent in better citizens, better community leadership, and an improved social structure.

Society tends to view the university graduate as a person well qualified and well prepared to assume the rôle of community leadership. It is almost mandatory, therefore, that the university graduate develop the self-reliance, initiative, judgment, and experience necessary to fulfill his responsibilities to the community. Admittedly, some of this training may be obtained in the classroom, but much of it tends to remain dormant in the university graduate unless supplemented by actual experiences in an area like student government. This contention is supported by the fact that so many university graduates who have not participated in student-government activities frequently fail to assume their responsibilities in the community.

To say that this disposition of responsibility is the best of all possible arrangements in the best of all possible circumstances might put us conveniently in the world of Voltaire's Dr. Pangloss, but nowhere near the world of reality. The present arrangement has several disadvantages, some of which may well lead to the end of student self-government as we now know it, unless something is done to remedy them.

When a student becomes involved in the activities of student government, he sometimes encounters a difficulty which is familiar to most student personnel administrators. Many students, particularly in the freshman and sophomore years at college, fail to budget their time adequately, with the frequent result of an overemphasis on activities to the detriment of academic work. By the same logic which holds that overemphasis on the purely academic areas of university life fails to produce a well-rounded graduate, so does an overemphasis on any other phase of university life fail to yield a holistic graduate. The most effective solu-

tion to this problem of overemphasis would seem to include a comprehensive program of counseling for the entering student.

A difficulty that faces every student government, autonomous or not, but which has greater impact on the autonomous student government, is the periodic turnover of student officers. The lack of continuity which results is a basic problem confronting student government, since it brings about a loss in efficiency and responsibility in the discharge of duties. Again and again it has led university administrators to conclude that a self-directing student government is of doubtful benefit to the university, since it is easier to perform the many functions of an independent student government than to suffer from the failures which result from recurrent changes in student officers. It is understandable that today's college administrator, faced as he is by a myriad of problems, is prone to accept the easiest way out of any one of these difficulties. This paternalistic attitude is dangerous to the maintenance of strength and integrity in our society and its institutions, and the educational administrator should think seriously about the consequences of such a philosophy before blindly embracing it.

The disadvantages of an autonomous student government from the point of view of the community are, again, corollary to those for the individual and the university. As mentioned previously, an overemphasis on any one phase of college life is objectionable because it does not adequately prepare the student for the assumption of his community duties. An independent student government may, therefore, be objectionable to the community because it frequently places too much emphasis on student-government activities. A college graduate who has self-reliance, initiative, and an ability to get along with others, but who lacks a solid academic background, is just as poorly equipped to take his place in society as is the bookish type of graduate. In short, for the community to reap the benefit of the best that the American college can produce requires a balance of all the things that our institutions of higher learning can provide.

What does the future hold for autonomous student government on the U.C.L.A. campus, as well as on other college campuses where it now exists? Its fate depends almost entirely on the action of the students themselves. The trend since the mid-thirties has been for students to gradually abandon the responsibilities accompanying independence while seeking to retain all the rights and privileges that go with it. This trend was reversed, however, during the late war years and the immediate postwar era, when college campuses were filled with men and women who, either because of their age or the maturing experiences they had been through, fully realized that with freedom, autonomy, and independence come many duties and obligations, one of the most important of which is the responsibility of self-policing.

The year 1953 finds the campuses of American colleges and universities filled with the kind of undergraduate population which has not been seen since the beginning of the Second World War. The contemporary under-

[*Continued on page 452*]

·The·Reporter·

THE University of Wisconsin is conducting a project to determine the effectiveness of films as an aid in furthering community improvement and development programs. Under the guidance of the Film Utilization Committee of the Kellogg Foundation in the University's School of Education, a series of film forums in twenty-four rural Wisconsin Communities is being used to determine the comparative effectiveness of four techniques of film utilization. The basis of the film forum is "Tale of Two Towns," a 16 mm. sound-motion picture presenting the documentary story of how two small Michigan towns went about solving their problems. As an important part of its study the Committee has developed evaluating devices to measure changes in the ideas and attitudes of members of the local community which have come about as the result of participation in the film forum.

MINIATURE earthquakes generated in a laboratory may furnish information that will some day help us to know more about big earthquakes, the nature of the earth's interior, and such practical matters as petroleum deposits. The tremors produced by a pulsating crystal which sends "microquakes" through blocks of granite, wax, or cement at the rate of 1,000 per second are used in a study which is being conducted at the Institute of Geophysics on the Los Angeles campus of the University of California. The shock waves are reproduced on an oscillograph and recorded photographically for detailed study.

Many of the important features of earthquakes and seismic prospecting procedures can be duplicated on a small scale in laboratory models, making it possible for scientists to study seismic phenomena under known and controlled conditions.

A NEW organization, formed to help place technically skilled persons in underdeveloped areas, is satisfying an important need in the field of technical assistance. The International Development Placement Association, 1841 Broadway, New York 23, is recruiting persons who are willing to work at locally prevailing salaries in Asia, Africa, Latin America, and the Near East.

Heretofore, opportunities for expatriates to work in underdeveloped areas have been largely limited to experts who function as top-policy advisers, and there was no machinery for fulfilling the routine positions requiring technical skills, since the local employing agencies cannot afford to pay salaries on European or United States levels and little effort had been made to find technicians to whom salary was a secondary consideration.

Currently, I.D.P.A. is accepting applications in a wide variety of technical fields. Agricultural experts are badly needed throughout the world, as are engineers, scientists, teachers, doctors, nurses, community-

development workers, and skilled craftsmen.

Although most of the applicants at this time are United States nationals, I.D.P.A.'s recruitment is international. Openings now exist in India, Indonesia, Iraq, East and West Africa, and some countries in Latin America.

IN THE belief that our nation does not "provide the majority of its young men and women with the necessary knowledge of the geography of the United States and that of other countries," the Association of American Geographers has adopted a resolution asking the United States Department of Health, Education, and Welfare and "appropriate non-governmental agencies to call this serious gap in our education to the attention of the National Education Association, state educational associations, school boards, parents, and educators, and to facilitate remedial action." Geography is not generally taught in American high schools. Yet this country fills a "position of world leadership in which a knowledge of how humankind has occupied and appropriated the globe and utilized its resources is of paramount importance."

TWO new scholarship funds have been established at Illinois Institute of Technology. A fund in chemistry and chemical engineering has been created by the Interchemical Corporation of New York City under which two scholarships will be awarded to students who have satisfactorily completed two full years of undergraduate study in chemistry, chemical engineering, physics, or other related sciences.

These scholarships, which began with the current academic year, will extend through 1954–55. The awards will be made by the Institute's Scholarship Committee on the basis of need, ability, character, and promise of leadership.

The second fund has been established in memory of William W. Crawford, late president of Edward Valves, Inc. It supports mechanical engineering scholarships which will pay full-tuition costs for two years, with the possibility of additional financial assistance. Candidates must fulfill the entrance requirements of Illinois Institute of Technology. Awards will be made by the personnel director of Edward Valves, Inc., or the Rockwell Manufacturing Company of Pittsburgh, with preference given to candidates who live near the Rockwell plants.

A RESEARCH library concentrating on the social and historical contributions of American women is being built by Radcliffe College. Established in 1944, the Women's Archives is collecting material covering three centuries of women's education, occupations, political activities, family lives, and so on. Although the library contains many published works, it specializes in research material such as diaries of early students or teachers, records of educational institutions, reports of associations founded to promote the improvement of women's education, and memoirs of their officers. Although the library is for the particular use of the faculty and students of Harvard University and Radcliffe College, it is available to any qualified adult involved in research.

The Archives would welcome con-

tributions of documents and books showing the growth of women's education; personal papers and records of educational progress are of particular interest. Funds to further develop the library would also be accepted with appreciation. For further information address Mrs. Richard Borden, director, Radcliffe Women's Archives, 10 Garden Street, Cambridge, Massachusetts.

A GRANT of $192,000 has been awarded to eight universities by the Fund for Adult Education to aid a three-year program to widen the extent and scope of education within labor unions. The grant was made through the Inter-University Labor Education Committee, composed of representatives of the A.F.L. and C.I.O. and one member from each of the participating universities, which are: University of California, University of Chicago, Cornell University, University of Illinois, Pennsylvania State College, Roosevelt College, Rutgers University, and the University of Wisconsin. The program was organized primarily to develop union discussions on foreign policy, economics, and community affairs.

NEW plans for the training of architects, landscape architects, and city planners are being put into effect at the Harvard University Graduate School of Design. The School will institute changes intended to enrich training in the professional fields and also to shorten the period of study required for the Master's degree in architecture by admitting qualified students, in some cases, at the end of three years of college training, and by granting advanced standing. Work in Design Research will be expanded, and the fields of city planning and architecture will be combined in a single department.

THE Medical School of Stanford University will be moved from San Francisco to the main campus at Palo Alto. After a year-long study by President Sterling and a faculty committee, the recommendation for the change was made on the conviction that the future of medical education is dependent upon the course of medical science, which in turn has become increasingly dependent upon the basic physical and social sciences. Hence the need for "bringing the School of Medicine into the closest possible physical and intellectual relationship to the whole University."

SEVENTEEN privately supported liberal-arts colleges, two federal government academies, and the University of the State of New York are the sponsors of a *Pictorial Guidebook to Colleges in the Empire State.* It contains extensive information about most of the 130 institutions of higher learning in the state. There is an illustrated article on each of the sponsoring institutions. The *Guide-book* will be distributed free to secondary-school administrators, guidance directors, and centers of educational information throughout the state.

THE extensive personal collection of Californiana brought together by the late J. Gregg Layne, noted Los Angeles historian and bibliographer, has been purchased by the library on the Los Angeles campus of the University of California. The collection consists of 3,000 volumes of general

California and Western Americana and 2,000 historical photographs of buildings and locations in Southern California dating back to 1880.

TEN English-language centers will be established in Indonesia to train secondary-school teachers in the teaching of English. The project, which was established at the request of the Indonesian Government, is intended to improve the quality and quantity of teachers of English in Indonesia. It is sponsored by the Ford Foundation and administered by the Institute of International Education, and will be carried out in co-operation with the Indonesian Ministry of Education. Eleven teachers, ten Americans and one Mexican, have been chosen for the project.

THE annual report of the Carnegie Corporation of New York lists total grants of $5,021,005 for the year ending September 30, 1952. Since its founding in 1911, the Corporation has made grants totaling $231,922,934.

One of the major goals of the Corporation has been the improvement of teaching in higher institutions. The largest single grant made during the year for this purpose was $700,000 for a five-year program of strengthening teaching and graduate scholarship at leading universities in the South. The institutions participating in this grant include Duke, Emory, North Carolina, Tulane, and Vanderbilt. Another approach to the problem of raising the level of college teaching is reflected in the grant of $50,000 to Princeton University to continue the Woodrow Wilson Fellowship program, designed to attract able young college graduates into college teaching by awarding them first-year graduate fellowships to pay part of their expenses. "This program has proved so successful in recruiting into the teaching profession young men of vigor and ability that it has now been taken over by the Association of American Universities and will henceforth be operated on a nation-wide basis."

Another series of grants is provided for those who have already gone into college teaching. Grants were renewed to Chicago, Columbia, Harvard, and Yale to provide internships for able young instructors from other colleges and universities. Each of the four institutions received $72,000.

In the field of national and international affairs, a prime objective has been "to assist in developing in this country an increased knowledge of foreign areas and an increased supply of trained experts on those areas." Grants for area studies, totaling $876,500, went to such institutions as Michigan, Northwestern, Pennsylvania, Princeton, Tulane, and Yale to support programs concerned with Africa, Japan, Latin America, the Near East, South Asia, and Southeast Asia. Other grants included $238,000 to the Council on Foreign Relations over a three-year period, and $3,000 to the United States Military Academy for an undergraduate conference on international relations.

In addition to grants in the United States, a total of $592,597 was allocated from the British Dominions and Colonies Fund. This included grants-in-aid for travel and study in the United States, the United Kingdom, and elsewhere, and grants to institutions in the British Commonwealth.

·Editorial·Comments·

Academic Freedom versus Intellectual Freedom

WE ARE indebted to a businessman for one of the most noteworthy recent discussions of academic freedom: "*Academic Freedom" Opened My Eyes*, by William Kostka.[1] It is notable in two respects. First, unlike the usual plea for and defense of academic freedom, this discussion reports in detail how the author came to change his views about its importance. Second, it proposes the substitution of a different term for the one commonly used.

Mr. Kostka is a public-relations and advertising executive, and an alumnus and member of the board of trustees of Knox College. He had often seen the phrases "academic freedom" and "loyalty oath," "but frankly they seemed unimportant in a world threatened by Communism and Communistic aggression." He regarded the former term as "a cloak to protect Communists" and left-wing sympathizers on college campuses.

As chairman-designate of a conference on public relations to be held at his alma mater, he advised the public-relations director of the College to omit from the agenda a discussion of academic freedom, on the ground that it was not important. Since the director disagreed with this judgment, Mr. Kostka went to Galesburg a day early "to explore this question of 'academic freedom.'"

In preliminary discussions, his previous ideas seemed to be confirmed. But as he explored the matter further, his eyes were opened. He learned for example, that some professors were refusing to make any public appearances for fear of being labeled subversive. He came to see the danger that the abler men would leave the teaching profession for other callings that offered fuller personal satisfactions and greater security. For the first time, he realized that loyalty oaths were demanded of teachers but not of college trustees, editors, or businessmen. He recalled that during the war he, as an editor, had been given "top secret" information without having had to sign an oath.

Suddenly, he "began to recognize the importance of the concern of these professors," and the need to ensure their freedom to learn and to teach. At the same time, he "realized what was wrong with the plea for 'academic freedom.'" He saw that, "while the professors were objecting to the signing of a loyalty oath because they were being separated from the rest of the population, they encouraged that separation by insisting on 'academic freedom.'"

Hence Mr. Kostka and his associates felt the need for a new and more inclusive term; they found it in a statement made earlier by Knox College when it had been accused of subversive activity. The term was

[1]This was published originally in the "Roundup" section of the *Denver Post*, July 12, 1953. It has been reprinted as a nine-page leaflet. Copies are available from the author at 1666 California Street, Denver, Colorado.

intellectual freedom. They liked this term because it designates something important to everyone, and not just to those in academic positions. When the public-relations conference was held, "Intellectual Freedom" was one of the topics discussed.

SO MUCH by way of summary of Mr. Kostka's account. What is to be said as to the significance of his experience and conclusions? It is noteworthy that when he really studied the problem, he quickly came to see the necessity for *Lernfreiheit und Lehrfreiheit*. Probably most laymen who examined the question in a serious way would come to the same conclusion. But most do not have Mr. Kostka's opportunity to study the question. Many will not understand it unless special effort is made to help them learn about it. The academic profession should accept as one of its most important duties that of adult education in this matter. There is no justification for the defeatist belief that laymen cannot understand it.

In his preference for the more inclusive term *intellectual freedom*,

[*Continued on page 452*]

Letter to the Editor

I write to thank you for sending me a copy of the review of *The Curriculum of the Catholic College* which appeared in the June issue of the JOURNAL OF HIGHER EDUCATION.

I am very much concerned by the regularity with which the reviewers of the proceedings of our workshops on higher education are exhibiting a total misunderstanding of the nature of Catholic education. I do not say that this misunderstanding is intentional but I do feel that it is strongly conditioned by a prejudice caused perhaps by certain charges that have for many years been leveled at Catholic education.

To be specific, Miss Wiley says this: "Catholic colleges assert frankly that their aim is indoctrination, that they are trying to foster the development of 'the supernatural man,' etc., etc." It is very difficult for me to understand how education if it is going to teach anything objective can do anything else but indoctrinate in the general sense of the word. Surely if we are going to teach patriotism in our schools the process by which we do it is no different from that by which we foster "the development of the supernatural man." I do not wish to go into any great length on the matter here but this is just to show what I mean. The hurling of the term "indoctrination" at Catholic education is an old "chestnut" and, of course, to any objective person has no validity.

Also in the last paragraph of the review there is a very vague reference to something unpleasant, I fear, in the two places where the reviewer calls attention (1) to "the democratic heresy" (page 15), and (2) to "the preparing of students for both 'a democratic way of life and the demands of supernatural living'" (page 90). The reviewer in the light of what she has read in this volume seems to think there is something inconsistent here. All I wish to say now is that if the reviewer really understood only the basic purposes and principles of Catholic education she would find nothing inconsistent here.

If this were the only review of this general nature, I wouldn't mind so much, but there have been several along these lines and I am beginning to be a bit perturbed about it. Just what I shall do about such reviews, I cannot say at the moment. At any rate I thank you for your kindness in sending me the review of the proceedings of the workshop.

ROY J. DEFERRARI, *Secretary General*
The Catholic University of America

··Reviews··

A Useful Book

WHEN PEOPLES SPEAK TO PEOPLES: ACTION GUIDE TO INTERNATIONAL CULTURAL RELATIONS FOR AMERICAN ORGANIZATIONS, INSTITUTIONS, AND INDIVIDUALS, *by Harold E. Snyder.* Washington, D. C.: American Council on Education, 1953. xiii+206 pp. $3.00.

This is the first book to attempt two important steps in the emerging theory of cultural-relations efforts: a set of criteria for developing programs, and a systematic appraisal of the available devices.

The proposed twelve questions to be asked about a projected enterprise are all decidedly relevant to its total impact on cultural relations, though few people would think of all of them. Mr. Snyder, with characteristic integrity, includes as the twelfth aspect to be scrutinized the question of what publicity will best serve the cause of understanding between peoples—no mention of serving the ego of the programmers. The book builds up to a final section where each main device—interchange of individuals, of groups, of materials; affiliations between institutions, organizations, or communities; pen-friend correspondence, and so on—appears with a list of the specific purposes it is capable of serving; its usual characteristics; the advantages claimed for it; the inherent limitations and the pitfalls to be avoided; the present state of evaluative research; and the agencies most experienced in the use of the device.

The maturity of this first systematic formulation is due partly to prior studies, of which the book gives a good selective bibliography. The thoroughness of the formulation was achieved partly by consulting over a hundred persons, early in 1952, in preparation for the final chapters. But the success is due most of all to Mr. Snyder's exceptional qualifications for the undertaking.

He combines the Quaker's concern for individual human beings, and dedication to service, with a professional background of training in social psychology, and two decades of experience in international cultural affairs, first as a foreign student himself in Germany, and since 1944 as director of training for the United Nations Relief and Rehabilitation Administration, director of the Commission for International Reconstruction and of the Commission on the Occupied Areas of the American Council on Education, and finally, director of the Washington Seminar of the American Friends Service Committee. U.N.R.R.A., C.I.R., and C.O.A. were all co-ordinating agencies. They witnessed a variety of innovations impossible to imagine except in such a world emergency as occasioned their temporary existence. They gave their administrators a unique view, objective yet intimate, of the multifarious projects carried on by operating agencies of all sorts, voluntary and governmental, national, bi-national, and international.

The first section of the book presents the author's reflections on that experience. He has been convinced, with reason, that any operating agency can increase its effectiveness by working with others through a co-ordinating agency, of which the most needed type is voluntary rather than governmental or intergovernmental. The co-ordinating service should not be compartmentalized into school, university, and non-academic segments, for that wastes many chances of mutual support between projects in the three categories. (The structure of educational institutions and organizations in the United States would have made it difficult for us to discover this point in normal times.) Likewise important is the participation of the operating agencies in the forming of a collective policy: a practice which U.N.R.R.A. pioneered, and which has since become one of the promising features that distinguish the United Nations and the specialized

agencies from the earlier techniques of international co-operation.

Mr. Snyder's well-founded reflections on the different capabilities of the several types of agency—voluntary, governmental, intergovernmental, the official advisory commission, and the rest—point toward a still further step that is needed in the consolidation of practical theory for the guidance of cultural-relations efforts, on which we see today that so much depends.

He does not find that higher education as a whole is yet meeting its international responsibilities. He refers to the promising self-surveys which numerous colleges and universities are making in co-operation with the Carnegie Endowment for International Peace. But he continues:

> Instead of using their tremendous intellectual resources to blaze new trails for government policies and programs, and for voluntary efforts, most institutions and professional associations still tend to wait for their cue. They tend to undertake only what government specifically requests, to depend upon government contracts for services obviously a part of their regular responsibility in a day when world affairs dominate the lives of all. This academic lag has occasionally been referred to as social and moral escapism. Under pressure from government, and with government grants to institutions and students, vast expansion has been taking place in the natural sciences. While this expansion is doubtless necessary, it must be accompanied by corresponding acceleration of work in the social sciences, humanities, and human relations, by serious study of the total role and responsibility of the whole of higher education in a day of growing, and possibly permanent, international tension (page 73).

This book will be valuable to higher education in both obvious and unexpected ways. Campus committees on international education can make good use of the criteria for projects, and of the chapter on twelve "neglected aspects." International-relations courses, though not treated in the book, could use it to make the discussion of cultural affairs more concrete and at the same time more imaginative of unused but logical potentialities. Faculty advisers and speakers will find that both the discussion chapters and the "action guide" embodied in the book can fruitfully be recommended to any student or community organization that contemplates international projects. Graduate students in quest of thesis subjects will discover intriguing questions that need research, especially the question of what is actually accomplished by each type of program. But the most persistent of the indirect implications for higher education is the constantly recurrent foreign-language problem: one after another of the attractive devices for improving cultural relations carries the restriction that the language barrier impairs its effectiveness. The title of the book, in fact, is no random metaphor or oblique allusion, but a head-on collision with the hard core of the obstacles to international understanding.

HOWARD LEE NOSTRAND
University of Washington

A Readable Analysis

WHO SHOULD GO TO COLLEGE, *by Byron S. Hollinshead.* New York: Columbia University Press, 1952. xvi+190 pp. (Published for the Commission on Financing Higher Education). $3.00.

Mr. Hollinshead has written a very readable analysis of the who, why, and where of college attendance in the United States, set in a realistic and discerning description of American universities and colleges as they are. Thumb-nail sketches of types of student and of institution give substance to the many generalizations of this study. The author knows colleges and junior colleges inside and out, sees the relation of educational problems to budgets, and knows from experience the long hard battle of academic standards. On page 56 the printer and the proofreader conspired to brighten his pages of statistics by presenting a college with a million-dollar endowment "which provides about a half-million yearly to devote to scholarships and running expenses"! But the rest of the statistics in this statistical book impress the reader as modest, descriptive, and persuasive.

A well-known critic of many of our

educational practices, Mr. Hollinshead none the less gives eloquent reasons for his confidence that the American system is a good one for America. He is aware of our remarkable accomplishments, notably in the public schools; and though he has conducted his part of the study for the Commission on Financing Higher Education in order to suggest improvements, he proposes no radical change in the underlying social aims of the education which we have been developing for three centuries.

This temperate realism gives cogency to his account of schools and colleges and to his recommendations. He refers to our effort to educate a "larger proportion of all young persons of ages 6 to 16 than any nation in history" (page 26), and to the creation of a million jobs in primary and secondary schools and two hundred thousand jobs in colleges, remarking that to staff and manage all this will continue to be a colossal task.

> Before adequate thought had been devoted to the aims of education, we had filled the classrooms, and someone had to be there to keep order. That the teaching has not always been of high quality should occasion no surprise; the real surprise is that it has been as good as it has (page 26).

The President's Commission on Higher Education (1948) said that 32 per cent of the college-age group in the United States would benefit from four years of college and should be given the means to attend. Mr. Hollinshead and his associates propose 25 per cent, or about one-half of those who graduate from secondary school. The latter is, of course, a more reasonable figure, if college work is to have a standard. Mr. Havighurst and Mr. Rodgers in their chapter, "The Rôle of Motivation in Attendance at Post-High School Educational Institutions," point out that lack of determination to enter and finish college greatly reduces the number who would accept if offered the financial means to attend. They conclude that if financial restrictions were removed, 5 to 7 per cent of the age group might profitably go to a four-year college who otherwise could not do so. These figures, again qualifying the reasoning of the President's Commission, still represent a large number of promising young people and an important national resource.

Mr. Hollinshead concludes that 453,000 additional students would continue in college to the fourth year if an average annual scholarship of $500 were made available to each of them. Total annual cost: $226,000,000.

> If we said that without too much difficulty or expense we could locate oil fields in the United States of a value almost equal to our present producing wells, or if we could point to potential copper mining sites that would almost double our production of that mineral, society would see to it that these resources were promptly exploited (page 82).

"We believe," say Mr. Hollinshead and his associates, "that all students in the upper quarter in ability of the age group should be given a certificate which so states and that society should find ways of financing those who want a college education if they need assistance" (page 83). Those below the upper quarter of the age group (this means the upper half of the high-school graduates) belong in community colleges, apprenticeship programs, and on-the-job training.

Half the bills should be paid by corporations and the other half by the federal government, which should establish

> one large scholarship source which can distribute aid where it is most lacking to give balance and breadth to a scholarship plan. . . . We do not know with any certainty how many of the students who are at present unmotivated would go to college even if guided and financed. Therefore, it would seem wise to start modestly (page 131).

There might be a pilot program. The Hollinshead group proposes an initial federal appropriation of $20,000,000, to become $50,000,000 in the fourth year.

Certainly, both the analysis of the problems and the solution proposed by Mr. Hollinshead and his associates are to be preferred to the ambitious proposition of the President's Commission, with its cavalier treatment of entrance standards and levels of performance in college. The Hollinshead study is genuinely concerned with the intellectual resources of

the United States and recognizes that, undisciplined, these are not especially useful to the republic.

The present volume was drafted in 1950 and accepted by the Commission in October, 1951. While it was being written and since, a new development in the financing of higher education, considerably stimulated by other work of the Commission, throws light on one-half the recommendations of Mr. Hollinshead's group. I refer to the increasing willingness of corporations to give money to independent colleges for general expenses. Mr. Hollinshead speaks of the growing attention of corporations to scholarship programs; the somewhat later development of gifts for general purposes, aiding as it does all independent-college financing, at least supports his belief that in the near future large sums may be given by corporations for such ends as undergraduate scholarships.

The establishment of "one large scholarship source," perhaps administered by the United States Office of Education, with funds appropriated by Congress, seems to me a less workable proposal. Mr. Hollinshead says appropriate things about maintaining standards of academic aptitude and about putting those who rank below the middle of all high-school graduates into community colleges. Being concerned with educational administration, he does not discuss the political meaning of further concentration of authority in Washington at this juncture in history. The recent necessary and intelligent expansion of R.O.T.C., with its inevitable yielding of small bits of control to the federal government, should lead us to look with special concern at further steps in this direction.

The developments which followed the G.I. bill should not be viewed altogether with complacency. While the bill was well administered and many veterans benefited immensely, we should observe its chief permanent effect on the balance, which Mr. Hollinshead rightly cherishes, between independent and tax-supported education, and its consequent effect on the standard and aims of university education. The crowding made possible by the G.I. bill occasioned colossal building appropriations for most of the tax-supported institutions. Emergency expansion has become permanent, especially in relatively young institutions which may still lack the clarity and steadiness of philosophy necessary to genuine university work. We are on the eve of another enrollment boom, and more and more buildings are being planned and approved by legislatures.

Is there an honest desire to maintain university standards by putting the lower half of the high-school graduates into the less expensive community colleges? The authorities of the state institutions could materially influence a move in this direction, but one looks in vain in many states to find the leadership. Instead, we see large institutions which are now called universities or four-year colleges becoming larger and larger on the specious plea that they can do nothing else, with a resultant inflation of the currency of genuine higher education.

In its fullness Mr. Hollinshead's proposal requires scrupulous concern for the requirements of four-year college work. The standard he proposes is not high, but it is considerably above that of many institutions in many states. It would seem that Congress has a right to expect people at home to prove their understanding of what it takes to make a university-grade institution before it considers whether or not federal scholarships can be administered truly on the basis of a standard of ability.

We have been moving fast both in our thinking and our performance in the treatment of the wasted, undisciplined intellectual talent of our country, but a few questions remain to be answered by experiment. Suppose, for example, a state should exclude from its four-year institutions all young people below the middle in ability of the high-school graduates, accommodating them in other post–high school institutions. Would there then be appreciable space in these four-year institutions for some of Mr. Havighurst's 7 per cent? If so, would the state, having the space, see to it that state scholarships enlarged the opportunity? Meanwhile, would the increase in corporation giving to inde-

pendent colleges appreciably improve their ability to award scholarships? Mr. Hollinshead and his associates express the opinion that little can be expected from an increase in state scholarship programs modeled on that of the New York State Regents, and perhaps they have canvassed such possibilities state by state. In Ohio such a program is under serious consideration, and perhaps it will accomplish for the state some of the desirable objectives of the committee's proposal. If it does, it will have the added advantage of inviting those who pay the tax money to spend it at home.

GORDON KEITH CHALMERS
Kenyon College

Widely Significant

THE DEVELOPMENT AND SCOPE OF HIGHER EDUCATION IN THE UNITED STATES, *by Richard Hofstadter and C. DeWitt Hardy*. New York: Columbia University Press, 1952. x+254 pp. (Published for the Commission on Financing Higher Education). $3.00.

The Commission on Financing Higher Education is working to close the dollar gap between the aspirations and the assets of the colleges and the universities. It wanted the two studies which make up this volume for its own information and use, very much, one surmises, as statesmen worried by economic discrepancies abroad have sought out expert opinion. The intramural purpose of the essays is manifest in their sketchiness on some points which are presumably irrelevant to the Commission's deliberations. Yet Mr. Hofstadter and Mr. Hardy have produced something much more widely significant than the usual staff report.

The implicit message of both essays is a denial of any notion that the aims of higher education and its financial means should be brought together by intellectual retrenchment. In his foreword, John D. Millett, executive director of the Commission, introduces the theme of the book—although the higher learning is not synonymous with life, it has long been and still is a feature of the growth of civilization. It follows that state legislatures and private benefactors must be informed of what higher education is, how it has developed, and what it tries to do; and the book throws light on precisely these questions. Mr. Hofstadter draws upon his resources as an historian to describe and interpret the development of American higher education in relation to religion, secularism, democracy and social mobility, vocationalism, science, intellectualism and its antithesis, and other aspects of American culture. What he produces is a thoughtful summary of writings on the history of the academic scene. Mr. Hardy deals with many of the same ideas but discusses them from the point of view of modern thought. He emphasizes a present need to encourage the kind of imaginative insight and seminal thinking which has its roots in liberal education, in a view of the human mind that does not slight its artistic and intuitive powers, and in a common understanding of the highest good, founded in religion. Both writers make statements which are open to question, but they raise issues of supreme importance. The ballast of learning and judgment at the command of the authors imparts to the discussion of these issues a stability which mere generalizations about the interdependence of education and culture do not possess.

Both essays leave the reader with little reason for faith in panaceas and simple answers to educational questions. Mr. Hardy, for example, does not confuse the need for religion in education with the all too simple formula that we ought to have more church-related colleges. Nor does his desire for religion blind him to the impossibility of manufacturing it *ad hoc*. For his part, Mr. Hofstadter undercuts any notion that the movement toward secularism was caused by some Old Deluder at work outside the context of American life. Higher education departed from the old tradition of its religious function because, to mention but one cause, many supporters of education wanted practical results which had little or nothing to do with religion or with the independent life of the mind. Mr. Hofstadter, indeed, suggests that the successes of higher education in the realm of mass production cannot be

disassociated historically from a decline of academic morale. So the question is posed: Must we purchase quantity at the expense of quality? Yes, asserts Mr. Hofstadter, if the intrinsic values of higher education are not commonly understood.

RICHARD J. STORR
University of Chicago

Unanimous Conclusions

NATURE AND NEEDS OF HIGHER EDUCATION: THE REPORT OF THE COMMISSION ON FINANCING HIGHER EDUCATION. New York: Columbia University Press, 1952. xiv+191 pp. (Published for the Commission on Financing Higher Education). $2.50.

This book, prepared by a commission of eight educational administrators (Bronk, Buck, Davidson, Dubridge, Fackenthal, Middlebush, Sterling, and Wriston), two lawyers (Bell, Greene), two industrialists (Harrison, Prentis), and one professor (Millett) as executive director, is a trenchant and very useful attempt to educate the American public concerning the economic problems now facing higher education and the means by which its financial needs can be met without distorting or enslaving it. That the public requires education concerning this problem the Commission is sure: "Although it is probably true that society normally will get the kind of education it wants, it does not follow that society will demand the kind of education it needs" (page 113).

The Commission is hopeful that once the public realizes what the nature and needs of higher education are, it will give it the steady, diversified, and abstemious support which it requires if its quality and freedom are to be maintained. Educational administrators will welcome the compact data which the Commission has supplied concerning their economic problems; the Commission's discussion of such matters as federal grants, corporation grants, foundation policies, and alumni giving; and its tactical and rhetorical hints concerning the securing and spending of funds. However, it would be interesting to know what would have been said differently by a commission which contained members representative of government, labor, and the private foundations.

The Commission places the main burden of increasing support upon sources outside the colleges and universities, but it does make some suggestions concerning economies which colleges and universities may undertake for themselves. This reviewer was particularly interested in the Commission's exhortation to the private liberal-arts colleges that they stop their expensive imitation of the universities and seek, instead, to consolidate and unify their curriculums and their faculties around what is essential and primary in the arts and sciences for the liberal education of "laymen." Not only is this suggestion interesting in itself; it was also reassuring in making it clear that when the Commission repeatedly insists that "good education is costly," it does not mean to have the reader infer that costly education is always good. The Commission does not argue that more money will in itself preserve and improve the colleges and universities. It does argue, eloquently and factually, that without more money the quality of higher education will decline, at a time when America needs higher education as never before.

> New educational achievement and new and balanced advances in educational endeavor on all fronts, will become possible only with an increase in income. That increase will be forthcoming when the American public clearly perceives the values to a free society which flow from higher education (page 115).

Two other qualities commend this book: it is short, and it is written in the English language.

F. CHAMPION WARD
University of Chicago

A Mine of Information

HIGHER EDUCATION IN THE FORTY-EIGHT STATES: A REPORT TO THE GOVERNORS' CONFERENCE, *by the Council of State Governments*. Chicago: Council of State Governments, 1952. xvi+317 pp. $5.00.

In December, 1950, the Executive Committee of the Governors' Conference and the Board of Managers of the Council of State Governments ordered a study

to be made of higher education in the forty-eight states. The results of this study was presented, in the volume under review, at the annual meeting of the Governors' Conference in 1952. The study was under the general direction of Frank Bane, executive director of the Council of State Governments. The report was largely the work of Elton McQuery, director of research for the Council. Floyd W. Reeves served as special consultant for the study.

The report covers rather exhaustively a wide range of topics, including a brief history of major developments in higher education in the United States, the educational programs now maintained by both public and privately controlled colleges and universities, the income and expenditures of these institutions, and the organization and control of the state institutions of higher education. The report proper is prefaced by a twelve-page summary. The main text contains a large number of statistical tables. An appendix of some 125 pages presents approximately 85 additional tables of statistical information and a directory of the names of the state governing boards and of the names and locations of the institutions over which these boards have control. A short bibliography of 85 titles is provided. There is a reasonably good index of the entire report. The data have been compiled with the usual thoroughness and accuracy for which the staff of the Council of State Govenments is noted.

Perhaps the most useful section of the report is the chapter on organization. This chapter describes the functions of the four major participating agencies in the state control of higher education: the legislature, the governor, the central state administrative agencies, and the institutional governing boards. The four key processes are analyzed: the program-determination process, the budget-appropriation process, the fiscal-management process, and the personnel-management process. The concluding section of the chapter deals with the problem of co-ordination, outlining the various patterns of co-ordinated control now being followed.

The report is intended to be a factual document. It makes no recommendations and suggests explicitly no courses of action. Each state is expected to decide for itself, in the light of the facts presented, what action it needs to take.

The volume is a mine of useful information. It should be especially valuable as a source of reference for members of legislatures, governors, state fiscal officers, members of governing boards, administrative officers and faculty members of state educational institutions, and citizens generally who are concerned about the provisions for higher education in their respective states.

JOHN DALE RUSSELL
Board of Educational Finance
State of New Mexico

Recommended Reading

SCHOLAR'S WORKSHOP: EVOLVING CONCEPTIONS OF LIBRARY SERVICE, *by Kenneth Brough.* Urbana, Illinois: University of Illinois Press. 1953. xvi+197 pp. (Illinois Contributions to Librarianship, No. 5). $4.50

Here is a book that university presidents, deans, and library-committee members will need to read. Using four leading universities—Harvard, Columbia, Chicago, and Yale—for source material, the author traces the evolution of many of the major library problems of our day, and finds that it is the toughness of the problems, rather than the incompetence of librarians, that causes them to remain unsolved.

The author confirms one fact that practicing librarians realize, even though university faculties do not: that the problems of internal library organization and of developing an economy of interlibrary services are far more complex and pressing today than is the matter of building library collections. Thus, the preoccupation of present-day librarians with such technical matters as cataloguing costs, interlibrary centers, bibliotechnology, and the like.

Brough puts his finger on one traditional weakness of librarians: their habit of justifying practices by precedent rather than by their effect on library users. The University of Chicago

Graduate Library School has done much to develop methods of validating library theory, and Mr. Brough has been quick to see that the new competence of librarians is a major factor.

His story of the tug of war between librarians and faculty members over the control of the library is a fine tale, but for all practical purposes this is now a matter of history. Present-day directors develop policies on the basis of facts and methods that command the respect of faculty library-committee members and of faculties generally. Also, the fact that librarians nowadays usually have Ph.D's helps. For these and other reasons the traditional antagonisms are disappearing.

RALPH E. ELLSWORTH
State University of Iowa

On Writing the History of Land-Grant Colleges and Universities

EARLE D. ROSS

[*Continued from page 414*]

education in the training for citizenship. Convincing evidence of the broadening view is the transformation of a number of the early "practical" agricultural colleges into full-fledged state universities. The chief influence of the land-grant idea upon the humanities in the universities has probably been in a trend away from traditional formalities and in a more functionalized emphasis.

IN THE developing study of the history of public administration, the history of the land-grant system, in its various reaches, presents policies of vital interest to political science as well as to education. The organic act was as notable for lack of reasoned objectives and specific prescriptions as for its potential significance. Practical application has involved administrative interpretation, supplemental enactments, and regional and local usage. How the act as enlarged and extended has influenced the secularizing of the control of higher education, the popularizing of its appeal, the centralizing of its administration, and the decentralizing of its operation are all pertinent concerns of the land-grant historian. The peculiarly popular responsiveness of these institutions has made them through the years unusually subject to pressures from varied special-interest and reform groups. Apart from the formal records, much of the reality of the influences that have entered into policy formation may be traced in the memoirs and correspondence of such representative pioneer administrators as Andrew D. White, James B. Angell, William W. Folwell, Isaac P. Roberts, Daniel C. Gilman, and Francis A. Walker.

This summary view of the varied interests and relationships of the land-grant type of education indicates something of the interplay of social forces which a real history should trace and explicate. The standing criticism of conventional histories of our institutions of higher education has been that in point of view and emphasis they are so episodical, provincial, and antiquarian that their appeal and contributions are narrowly limited. It would seem that if the histories of our land-grant colleges and universities are allowed to reflect the conditioning social and institutional trends which have so largely shaped and actuated their careers, along with the variant tendencies of the particular institution, they may not only help to clarify current

educational issues but as well make definite and substantial contributions to the social and intellectual history of the nation. [Vol. XXIV, No. 8]

Certain Characteristics of General Education

JUDSON R. BUTLER

[*Continued from page 431*]

group of teachers and a given student body, the prospects might be clearly improved.

While one may theorize about general education or plan the architecture in broad generalities, the actual program of instruction is built and rebuilt brick by brick. The mortar which holds the structure together is a compound of interest, common aims, an element of application and relevancy to the life of the student, and the cement of coordination. Here, no less than in any other area of responsible human endeavor, a free and open mind, psychological understanding, and, above all, trial and error and careful evaluation, in the long run will prove more reliable than conclusions founded upon tradition, intuition, or common (academic) sense. [Vol. XXIV, No. 8]

Hawkeye or Uncas?

[*Continued from page 437*]

graduate regards the university administration as the surrogate of parental authority and expects all the policing and disciplinary functions of university life to be handled exclusively by "the dean." At the same time, however, he is most vociferous in defense of the privileges which he has inherited from his older, more responsible predecessors.

It should be clear that such a situation cannot long endure. There are certain responsibilities which must be accepted; and if the student government fails to accept these, the university will be forced to assume them instead. If that should happen, student government is surely doomed, and so far as student autonomy is concerned, U.C.L.A. will become the last of the Mohicans—an ignoble fate when the opportunity to become a Pathfinder is yet within reach.

Academic Freedom versus Intellectual Freedom

[*Continued from page 443*]

Mr. Kostka has a valid and important point. We of the profession have too often discussed academic freedom as though it were a special privilege for teachers, rather than a phase of the freedom which is the birthright of every person in a democracy. By doing this, we have unwittingly played into the hands of the demagogues and perplexed many honest laymen.

The professor of economics knows a great deal more about the tariff than the typical layman. But his freedom to study the tariff and to set forth the conclusions that his data warrant is basically the same as the freedom of the bricklayer or businessman to criticize the tariff policy of the government. The freedom of the professor is part of the seamless web of freedom for everyone. As members of the profession, we should promote with utmost vigor intellectual freedom for all men. It is only as we do this that we shall most effectively protect our own freedom. In this matter, there is no place for the ivory-tower attitude.

R. H. E.

In the Lay Magazines

"The Consolations of Illiteracy," by Phyllis McGinley, *Saturday Review*, August 1, 1953.

The rather startling thesis of this essay is that "there is something to be said for a bad education." Education, in the formal sense, that is, and confined chiefly here to knowledge of literature. The victim—or shall we say the beneficiary—of a faculty "which for relentless mediocrity must have outstripped any in the land," Miss McGinley emerged from college "quite uncorrupted by knowledge." She had done some reading, of course, but almost entirely of contemporaries. The classics were an unexplored land to which she came in maturity

> . . . as an astonished stranger. No one who first enters that country on a conducted tour can have any notion what it is like to travel it alone, on foot, and at his own pace.

The reader who approaches the classics late in life comes to them without prejudice, on an entirely friendly basis, which the well-educated, permanently scarred by the required reading and forced book reviews of youthful years, cannot claim to do. Behind their pages lurks "no specter of the classrooms and the looseleaf notebook."

Reading must come at the proper time of life. Maturity is an essential to the full enjoyment of certain books. *Huckleberry Finn*, for instance, a notable reward for her "underprivileged youth," which Miss McGinley first read at the ripe age of forty. "For no matter how enchanting to the young are the realms of gold, maturity makes one a better traveler there." The mature reader is patient. He has no deadline to meet. He may wander at will from one breathless discovery to another, in whatever century he chooses—"I read Gibbon one week and Sarah Orne Jewett the next, with catholic pleasure." He is under no constraint to conform to fashionable cults. He suffers no "compulsion from either the critics or the professors to like *anything*."

Miss McGinley, teacher, editor, freelance writer, and in private life Mrs. Charles Hayden, admits freely that she has experienced "crippling lacks as the result of late literary ripening." "I shall never read Latin verse in the original," she repines, "or have a taste for the Brontës." Nevertheless, the delights of delayed encounters with great minds compensate for many losses. Thus "ignorance has its brighter side." "Blessed are the illiterate, for they shall inherit the Word!"

Books Received but Not Reviewed

BERRIEN, F. K. *Practical Psychology*. Rev. ed. New York: Macmillan Company, 1952. xvi+640 pp. $5.00.

CABOT, HUGH, AND KAHL, JOSEPH A. *Human Relations*. Vol. I: *Concepts in Concrete Social Science*. Vol II: *Cases in Concrete Social Science*. Cambridge, Massachusetts: Harvard University Press, 1953. xxxi+331 pp., viii+273 pp. $4.75, $4.25.

CLOUD, ROY W. *Education in California*. Stanford, California: Stanford University Press, 1952. xiv+296 pp. $6.00.

COLLEGE STUDY IN INTERGROUP RELATIONS, Lloyd Allen Cook, director. *Intergroup Relations in Teacher Education*. Washington, D. C.: American Council on Education, 1951. xvi+271 pp. $3.75.

FROEHLICH, CLIFFORD P., AND DARLEY, JOHN G. *Studying Students: Guidance Methods of Individual Analysis*. Chicago: Science Research Associates, Inc., 1952. xviii+411 pp. $4.25.

HARDING, HAROLD F., editor. *The Age of Danger: Major Speeches on American Problems*. New York: Random House, Inc., 1952. xiv+561 pp. $2.45.

HINE, REGINALD. *Relics of an Un-Common Attorney*. New York: Macmillan Company, 1951. xxvi+253 pp. $5.00.

KAPLAN, LOUIS, AND BARON, DENIS. *Mental Hygiene and Life*. New York: Harper and Brothers, 1952. xvi+422 pp. $3.50.

KYTE, GEORGE C. *The Principal at Work*. Rev. ed. Boston: Ginn and Company, 1951. x+531 pp. $4.50.

SARGENT, PORTER. *The Sargent Guide to Summer Camps for Boys and Girls*. 7th ed. Boston: Porter Sargent, 1952. 95 pp. $1.10.

SHANE, HAROLD G., AND MCSWAIN, E. T. *Evaluation and the Elementary Curriculum*. New York: Henry Holt and Company, 1951. xiv+477 pp. $3.90.

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